UNIT
1.1.1

PAKISTAN'S LOCATION AND IMPORTANCE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State the latitudinal extent of Pakistan.	1 × 1 mark: approximately 24°N to 37°N. Other accurate equivalent wording should be credited.
What is Pakistan's longitudinal extent?	1 × 1 mark: approximately 61°E to 77°E. Other accurate equivalent wording should be credited.
Name the sea south of Pakistan.	1 × 1 mark: Arabian Sea. Other accurate equivalent wording should be credited.
Which hemisphere is Pakistan in?	1 × 1 mark: Northern and Eastern hemispheres. Other accurate equivalent wording should be credited.
Identify one country bordering Pakistan to the west.	1 × 1 mark: Iran or Afghanistan. Other accurate equivalent wording should be credited.
Define the term absolute location.	1 × 1 mark: the exact position of a place expressed using coordinates such as latitude and longitude. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two ways Pakistan's location affects its development.	Award 1 mark for each of any two valid points. Indicative content: Arabian Sea ports allow overseas trade; borders permit regional trade with China, Afghanistan, Iran and India; the Indus Plain supports farming and settlement; mountain barriers increase transport and security costs.
State two neighbouring countries of Pakistan.	Award 1 mark for each of any two valid points. Indicative content: India; China; Afghanistan; Iran.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe Pakistan's relative location.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: Pakistan is in South Asia; India lies to the east; China lies to the north-east; Afghanistan and Iran lie to the west; the Arabian Sea lies to the south.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how latitude affects temperature in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: lower latitudes receive more direct solar radiation and are warmer, higher latitudes receive less direct radiation and are cooler, seasonal sun angle changes temperature through the year.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why Pakistan's location affects climate.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. southern low latitude gives more direct solar energy and higher temperatures; 2. the Arabian Sea moderates coastal temperature and supplies moisture; 3. northern mountains lower temperature with altitude and influence rainfall/air masses; 4. continental inland location produces greater temperature extremes. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why location affects trade.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. Arabian Sea ports allow overseas trade; 2. borders permit regional trade with China, Afghanistan, Iran and India; 3. the Indus Plain supports farming and settlement; 4. mountain barriers increase transport and security costs. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of Pakistan's location for economic development.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: Arabian Sea access supports overseas trade through Karachi Port, Port Qasim and Gwadar, Pakistan lies between China, Central Asia, South Asia and the Middle East, creating transit-trade and corridor opportunities; the Indus corridor links major farming, industrial and urban areas to ports. Valid alternative/qualification: mountain barriers and long borders make transport and security costly; regional tensions can interrupt trade; location brings benefits only where infrastructure, investment and political stability are adequate. Relevant named evidence may include: Karachi Port; Port Qasim; Gwadar; China–Pakistan Economic Corridor and Khunjerab Pass. Supported judgement: judge that location is a major opportunity, but its value depends on secure relations and reliable transport and port infrastructure. Other accurate, relevant material must be credited.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
'Pakistan's location is mainly an advantage for its development.' How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: Arabian Sea access supports overseas trade through Karachi Port, Port Qasim and Gwadar; Pakistan lies between China, Central Asia, South Asia and the Middle East, creating transit-trade and corridor opportunities; the Indus corridor links major farming, industrial and urban areas to ports. Valid alternative view, limitation or disadvantage: mountain barriers and long borders make transport and security costly; regional tensions can interrupt trade; location brings benefits only where infrastructure, investment and political stability are adequate. Relevant named evidence may include: Karachi Port; Port Qasim; Gwadar; China–Pakistan Economic Corridor and Khunjerab Pass. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge that location is a major opportunity, but its value depends on secure relations and reliable transport and port infrastructure. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.2

LANDFORMS OF PAKISTAN

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Identify the longest river in Pakistan.	1 × 1 mark: Indus River. Other accurate equivalent wording should be credited.
Identify one western tributary of the Indus River.	1 × 1 mark: Kabul River or Kurram River. Other accurate equivalent wording should be credited.
Identify the highest peak in Pakistan.	1 × 1 mark: K2. Other accurate equivalent wording should be credited.
Identify the plateau found in western Pakistan.	1 × 1 mark: Balochistan Plateau. Other accurate equivalent wording should be credited.
Identify one desert in Pakistan.	1 × 1 mark: Thar, Thal, Cholistan or Kharan. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two uses of river water in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: irrigation; domestic supply; industrial use; hydroelectric power.
State two sources of water for rivers in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: snow and glacier melt raises flow in spring and summer; monsoon rain raises summer flow; flow is lower in the dry winter season; tributaries add water to the Indus.
Identify two mountain ranges in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: Himalaya; Karakoram; Hindu Kush; Sulaiman; Kirthar.
State two characteristics of deserts in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: very low and unreliable rainfall; high evaporation and large temperature range; sparse xerophytic vegetation; sand dunes or stony surfaces and scarce surface water.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how river flow changes throughout the year.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: snow and glacier melt raises flow in spring and summer; monsoon rain raises summer flow; flow is lower in the dry winter season; tributaries add water to the Indus.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the characteristics of the Indus Plain.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: broad and mostly flat alluvial plain; formed by the Indus and its tributaries; fertile soils support intensive farming; dense settlement and transport routes are common.
Describe the relief of the Balochistan Plateau.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: high, dry plateau in western Pakistan; broken by mountain ranges and basins; steep slopes and isolated valleys; sparse drainage and vegetation.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why mountains affect human activities.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. steep slopes make roads/buildings difficult and costly; 2. cold temperatures and thin soils shorten the farming season; 3. snow/glaciers supply rivers and HEP; 4. scenery and cool climate support tourism. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why landforms influence economic activities in Pakistan.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. flat fertile plains allow intensive farming and easy transport; 2. mountains provide water, HEP, forests, minerals and tourism; 3. deserts/plateaus restrict farming but support grazing and mineral extraction; 4. coasts support ports, fishing and trade. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the advantages and disadvantages of living in mountainous areas.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: mountains supply snow and glacier melt to rivers and provide HEP sites; scenery and cooler summers support tourism; forests, grazing and some minerals support local livelihoods. Valid alternative/qualification: steep slopes, cold winters and thin soils restrict farming, settlement and transport; landslides and snow can isolate communities and raise service costs. Relevant named evidence may include: Karakoram; Himalaya; Murree; Hunza. Supported judgement: balance resource and tourism benefits against isolation and high construction costs; the result depends on altitude and accessibility. Other accurate, relevant material must be credited.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
'Rivers are the most important natural resource in Pakistan.' How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: the Indus system supplies irrigation to the Indus Plain and supports food and cash crops; river water supplies homes and industry; large flows and relief provide hydroelectric power and reservoirs. Valid alternative view, limitation or disadvantage: forests, minerals, soils and ports also support development; rivers can flood, carry pollution and create allocation problems. Relevant named evidence may include: Indus River, Indus Basin Irrigation System; Tarbela Dam; Mangla Dam. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge rivers to be fundamental because they connect water, food and power, while recognising that effective management and other resources are also necessary. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.3

NATURAL RESOURCES OF PAKISTAN A – FORESTS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term afforestation.	1 × 1 mark: planting trees on land that was not previously forested. Other accurate equivalent wording should be credited.
Name one forest type found in northern Pakistan.	1 × 1 mark: coniferous forest. Other accurate equivalent wording should be credited.
Name one use of mangrove forests.	1 × 1 mark: coastal protection, fish nursery habitat, fuelwood or timber. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two uses of forests in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: timber and fuelwood; jobs, tourism and forest products; soil and watershed protection; carbon storage; habitat and biodiversity; reduced runoff and flooding.
Give two causes of deforestation.	Award 1 mark for each of any two valid points. Indicative content: fuelwood collection; commercial logging; clearance for farming or settlement; overgrazing; roads and other infrastructure.
State two environmental benefits of forests.	Award 1 mark for each of any two valid points. Indicative content: timber and fuelwood; jobs, tourism and forest products; soil and watershed protection; carbon storage; habitat and biodiversity; reduced runoff and flooding.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the distribution of forests in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: coniferous forests are concentrated in northern and north-western highlands; riverine forests occur along the Indus floodplain; mangroves occur in the Indus Delta/coast; irrigated plantations occur mainly in Punjab and Sindh; forest cover is sparse in arid Balochistan and deserts.
Describe the characteristics of coniferous forests.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: found at higher altitude in the northern and north-western mountains; evergreen needle-leaved trees; often grow on steep, cool and wetter slopes; provide timber and watershed protection.
Describe the importance of mangrove forests.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: protect the coast from erosion and storm surge; provide breeding/nursery grounds for fish and shrimp; support wildlife and biodiversity; provide fuelwood and livelihoods.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why deforestation affects soil.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. loss of roots leaves soil unbound so erosion increases; 2. loss of canopy exposes soil to raindrop impact and rapid runoff; 3. less leaf litter reduces humus and soil fertility. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why forests are important for wildlife.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. forests provide food, shelter and breeding habitats; 2. connected habitats allow movement and maintain genetic diversity; 3. protecting food chains maintains biodiversity. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why forests help reduce climate change.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. photosynthesis removes carbon dioxide from the atmosphere; 2. carbon is stored in wood, roots and soils; 3. forest protection avoids carbon emissions from burning and decay. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of forests for local communities.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: forests provide fuelwood, timber, fodder and non-timber products for household use and income; forestry and tourism create employment; watershed protection reduces erosion and helps maintain local water supplies. Valid alternative/qualification: overdependence can cause depletion, and protection rules may restrict access unless communities share benefits. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves; community forestry. Supported judgement: judge importance according to how dependent the community is on forest products and whether use is sustainable. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the causes of deforestation in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: household demand for fuelwood causes repeated cutting where affordable alternatives are limited; commercial logging and timber demand remove mature trees; land is cleared for farming, grazing, roads and settlement. Valid alternative/qualification: the relative importance varies by region; weak enforcement, poverty and population growth intensify several direct causes. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves. Supported judgement: identify the dominant cause for the stated place or scale and support it with a causal link, while recognising interacting causes. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Deforestation is the main environmental issue in Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: deforestation removes roots and canopy, increasing erosion, runoff and flood risk; habitat loss reduces biodiversity and burning or decay releases stored carbon; forest loss can silt reservoirs and reduce water storage and HEP. Valid alternative view, limitation or disadvantage: water and air pollution, land degradation and climate hazards are also serious environmental issues; the severity of deforestation varies by region and can be reduced by effective management. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves; Tarbela reservoir catchment; Ten Billion Tree Tsunami Programme. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: compare the scale, duration and number of people or ecosystems affected before deciding whether deforestation is the main issue. Credit any other accurate, relevant and developed argument.
Evaluate the effectiveness of methods used to reduce deforestation in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: afforestation and reforestation restore tree cover and carbon storage; protected areas, quotas and enforcement can reduce illegal cutting; community forestry gives local people income and responsibility, improving monitoring; alternative fuels reduce household demand for fuelwood. Valid alternative view, limitation or disadvantage: young trees take years to provide mature-forest functions; weak enforcement, grazing, fire and fuel poverty can reduce survival and effectiveness. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangrove restoration; community forestry in northern Pakistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge measures by long-term survival, enforcement and community benefit rather than the number of seedlings planted. Credit any other accurate, relevant and developed argument.

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SOURCE: FIG. A1 SHOWS A MAP OF FOREST DISTRIBUTION IN PAKISTAN.

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Using Fig. A1, identify the area with the highest forest density. [1]	1 × 1 mark: award 1 mark for an accurate identification taken directly from the named figure/resource. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Using Fig. A1, describe the distribution of forests in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: coniferous forests are concentrated in northern and north-western highlands; riverine forests occur along the Indus floodplain; mangroves occur in the Indus Delta/coast; irrigated plantations occur mainly in Punjab and Sindh; forest cover is sparse in arid Balochistan and deserts.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons for this distribution. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. different temperatures and rainfall allow different tree species to grow, so coniferous forests are concentrated in cooler wetter highlands; 2. saline tidal water and deposited sediment create suitable conditions for mangroves in the Indus Delta; 3. seasonal river flooding supplies water to riverine forests along the Indus floodplain; 4. irrigated plantations occur where canals provide reliable managed water in otherwise drier lowlands. Credit any other accurate chain that explains how or why the stated outcome occurs.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) "Forest resources in Pakistan are under threat." How far do you agree? Use Fig. A1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: fuelwood collection, logging, overgrazing and land clearance reduce forest area and quality; climate stress, fire and coastal change can damage particular forest types; loss of forest increases erosion, habitat loss, runoff and reservoir sediment. Valid alternative view, limitation or disadvantage: planting, mangrove restoration, protected areas and community management can reduce the threat; the degree of threat differs among the forest regions shown in Fig. A1. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves; Ten Billion Tree Tsunami Programme. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: use Fig. A1 to identify exposed forest regions and decide whether present pressures outweigh conservation gains. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.3

NATURAL RESOURCES OF PAKISTAN B – MINERALS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term non-renewable resource.	1 × 1 mark: a resource used faster than natural processes can replace it. Other accurate equivalent wording should be credited.
Name one metallic mineral found in Pakistan.	1 × 1 mark: chromite, copper, gold or iron ore. Other accurate equivalent wording should be credited.
Identify one location of a non-metallic mineral deposit in Pakistan.	1 × 1 mark: Khewra rock salt, limestone/gypsum deposits in Punjab or Balochistan, or another correct named location. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two uses of minerals.	Award 1 mark for each of any two valid points. Indicative content: raw materials for construction and manufacturing; jobs and local income; exports earn foreign exchange; government tax/royalty revenue; domestic supply can reduce imports.
Give two problems caused by mining.	Award 1 mark for each of any two valid points. Indicative content: dust and noise pollution; water contamination from waste; habitat and vegetation loss; soil erosion and unstable spoil; landscape scarring.
State two types of minerals.	Award 1 mark for each of any two valid points. Indicative content: metallic minerals; non-metallic minerals; energy minerals/fuels.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the distribution of minerals in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: minerals are unevenly distributed; copper-gold occurs at Saindak/Reko Diq in Balochistan; rock salt occurs in the Salt Range/Khewra; chromite occurs around Muslim Bagh; limestone and gypsum are widespread in Punjab and Balochistan.
Describe the distribution of non-metallic minerals in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: limestone and gypsum occur in Punjab and Balochistan; rock salt occurs at Khewra/Salt Range; marble occurs in Khyber Pakhtunkhwa and Balochistan; deposits are uneven and often near geological uplands.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the importance of mineral resources.	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: raw materials for construction and manufacturing; jobs and local income; exports earn foreign exchange; government tax/royalty revenue; domestic supply can reduce imports.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why mining contributes to economic development.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. mines create direct and indirect jobs, so household income and local spending rise; 2. domestic minerals supply construction and manufacturing, reducing imports and supporting industrial output; 3. mineral exports earn foreign exchange and taxes or royalties can fund services. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why mining can damage the environment.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. blasting/crushing releases dust and noise which harm people and wildlife; 2. mine waste and chemicals contaminate water and soils; 3. vegetation clearance destroys habitats and increases erosion; 4. open pits and spoil scar and destabilise land. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the advantages of mining for Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: domestic minerals supply construction and manufacturing, reducing some imports; mines create jobs, tax or royalty revenue and export earnings; roads, power and services may develop in remote areas. Valid alternative/qualification: deposits are finite and prices fluctuate; pollution, habitat loss and health costs may exceed local benefits; benefits remain limited if minerals are exported without local processing. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; limestone and gypsum for cement. Supported judgement: judge importance by net long-term value, local processing and environmental management rather than extraction volume alone. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the environmental impacts of mineral extraction.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: vegetation clearance and open pits destroy habitats and scar land; blasting and crushing create dust and noise; mine waste and drainage can pollute soil and water. Valid alternative/qualification: mining provides raw materials, jobs, export income and infrastructure; regulation, waste treatment and reclamation can reduce damage. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; Reko Diq. Supported judgement: weigh the duration and reversibility of environmental harm against the distribution and size of economic benefits. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Mineral resources are essential for Pakistan's economic development." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: domestic minerals supply construction and manufacturing, reducing some imports; mines create jobs, tax or royalty revenue and export earnings; roads, power and services may develop in remote areas. Valid alternative view, limitation or disadvantage: deposits are finite and prices fluctuate; pollution, habitat loss and health costs may exceed local benefits; benefits remain limited if minerals are exported without local processing. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; limestone and gypsum for cement. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge importance by net long-term value, local processing and environmental management rather than extraction volume alone. Credit any other accurate, relevant and developed argument.
Evaluate the sustainability of mineral extraction in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: backfilling, grading, replacing topsoil and revegetation restore safer future land use; lined tailings storage and mine-water treatment reduce contamination; environmental monitoring, licences and penalties can enforce standards. Valid alternative view, limitation or disadvantage: resources remain non-renewable; controls are costly and enforcement may be weak, especially for small or illegal workings; even reclaimed land may not restore the original ecosystem. Relevant named evidence may include: Saindak copper-gold; Reko Diq; Khewra rock salt; Muslim Bagh chromite. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge sustainability from resource efficiency, pollution control, reclamation and whether local communities receive lasting benefits. Credit any other accurate, relevant and developed argument.

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SOURCE: FIG. B1 SHOWS A GRAPH OF MINERAL PRODUCTION IN PAKISTAN (CHROMITE GYPSUM AND ROCK SALT).

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Using Fig. B1, identify the mineral with the highest production. [1]	1 × 1 mark: award 1 mark for an accurate identification taken directly from the named figure/resource. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the trend in mineral production shown in Fig. B1. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: award for the correct overall rise/fall/fluctuation from Fig. B1; credit a valid comparison among chromite, gypsum and rock salt; credit highest/lowest or peak/trough with accurate data from the graph.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons for this trend. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. changes in demand and market prices alter output; 2. investment, machinery and mine capacity affect production; 3. deposit quality/depletion and transport or security problems change extraction; credit links supported by the supplied graph. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of mineral resources for Pakistan's development. Use Fig. B1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: domestic minerals supply construction and manufacturing, reducing some imports; mines create jobs, tax or royalty revenue and export earnings; roads, power and services may develop in remote areas. Valid alternative view, limitation or disadvantage: deposits are finite and prices fluctuate; pollution, habitat loss and health costs may exceed local benefits; benefits remain limited if minerals are exported without local processing. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; limestone and gypsum for cement. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge importance by net long-term value, local processing and environmental management rather than extraction volume alone. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.3

NATURAL RESOURCES OF PAKISTAN C – WATER

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term water scarcity.	1 × 1 mark: a situation in which available water is insufficient to meet demand. Other accurate equivalent wording should be credited.
Name one source of freshwater in Pakistan.	1 × 1 mark: river, reservoir, groundwater, rainfall, snowmelt or glacier melt. Other accurate equivalent wording should be credited.
Name one use of water in agriculture.	1 × 1 mark: irrigation or livestock watering. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two causes of water shortage.	Award 1 mark for each of any two valid points. Indicative content: irrigation and livestock; domestic drinking and sanitation; industry; hydroelectric power.
Give two uses of water in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: irrigation and livestock; domestic drinking and sanitation; industry; hydroelectric power.
State two sources of water supply.	Award 1 mark for each of any two valid points. Indicative content: Indus and its tributaries; reservoirs; groundwater/tubewells; rainwater, snow and glacier melt.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the sources of water supply in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: Indus and its tributaries; reservoirs; groundwater/tubewells; rainwater, snow and glacier melt.
Describe seasonal changes in water availability.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: snow/glacier melt increases supply in spring and summer, monsoon rain raises summer river flow; winter flow is generally lower, drought years reduce river and groundwater supply.
Describe the importance of irrigation.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: supplies water where rainfall is low or unreliable; allows crops to grow in dry seasons; supports higher yields and multiple cropping; improves food supply, farm income and agricultural raw materials.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why Pakistan faces water shortages.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. population, cities and industry increase demand faster than supply, so less water is available per person; 2. unreliable rain and drought reduce river flow, reservoir storage and groundwater recharge; 3. canal leakage and inefficient flood irrigation waste water before it reaches users; 4. sewage and industrial pollution make part of the physical supply unsafe to use. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why dams help manage water resources.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. reservoirs store wet-season/snowmelt water for release in dry periods; 2. controlled releases supply irrigation, homes and industry; 3. stored water drives turbines to generate HEP; 4. reservoir operation can reduce some flood peaks. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why climate affects water supply.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. failed rainfall/drought reduces rivers, reservoirs and groundwater recharge; 2. snow/glacier melt raises summer flow but long-term ice loss reduces dry-season storage; 3. high temperature increases evaporation and demand. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of water for agriculture in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: irrigation supplies crops where rainfall is low or unreliable, allowing cultivation over much of the Indus Plain; reliable water supports higher yields, multiple cropping and water-demanding cash crops; water sustains livestock and agro-industries and therefore rural income and food security. Valid alternative/qualification: inefficient irrigation causes leakage, waterlogging and salinity; temperature, soil, seeds, fertiliser, markets and farm management also control output. Relevant named evidence may include: Indus Basin Irrigation System; Sukkur Barrage; Punjab and Sindh; cotton, rice and wheat. Supported judgement: judge water essential to Pakistan's agriculture, but its benefit depends on efficient and equitable management. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the causes of water shortages in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: population, urban growth, industry and irrigation increase demand; variable monsoon rain, drought and changing snow or glacier melt make supply unreliable; leakage, inefficient irrigation, pollution and limited storage reduce usable supply. Valid alternative/qualification: management measures such as conservation, treatment, efficient irrigation, recharge and appropriately located storage can reduce shortages; other national challenges such as energy, poverty and climate hazards may be more severe depending on place and time. Relevant named evidence may include: Indus Basin Irrigation System; Tarbela and Mangla; drip irrigation; rainwater harvesting. Supported judgement: judge the main cause or best strategy by scale, cost and long-term reliability; recognise that supply and demand measures must work together. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Water shortages are the greatest challenge facing Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: shortages threaten drinking water and sanitation; reduced irrigation endangers food production and rural income; industry and HEP also need dependable water, while population growth, waste and variable rainfall make the problem persistent. Valid alternative view, limitation or disadvantage: poverty, energy shortage, unemployment, air pollution and floods may cause greater losses in particular places or years; conservation, efficient irrigation, treatment, recharge and storage can reduce water risk. Relevant named evidence may include: Indus Basin Irrigation System; Tarbela and Mangla; Thar and Balochistan drought; drip irrigation. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge water shortage a fundamental long-term challenge because it affects several sectors, but compare its scale and urgency with the named alternative challenge. Credit any other accurate, relevant and developed argument.
Evaluate the effectiveness of strategies used to manage water resources in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: dams and reservoirs store high flows for dry periods; drip irrigation, canal lining and leakage repair reduce waste; rainwater harvesting, groundwater recharge, treatment and reuse increase usable supply; pricing, metering and education can reduce demand. Valid alternative view, limitation or disadvantage: large schemes are costly and may displace people or damage ecosystems; maintenance, farmer access and enforcement can limit effectiveness; climate change and demand growth may outpace supply gains. Relevant named evidence may include: Tarbela and Mangla; Indus Basin Irrigation System; drip irrigation; Recharge Pakistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the most effective approach to be an integrated mix of supply, demand and water-quality measures, assessed by long-term reliable delivery. Credit any other accurate, relevant and developed argument.

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SOURCE: FIG. C1 SHOWS A MAP OF RIVER SYSTEMS AND MAJOR DAMS IN PAKISTAN.

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Using Fig. C1, name one major dam.	1 × 1 mark: Tarbela or Mangla. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the distribution of rivers shown in Fig. C1.	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: the Indus flows generally north to south; Jhelum, Chenab, Ravi and Sutlej join from the east; Kabul and other western tributaries join from the west; the network is densest in the north and Indus Plain before reaching the Arabian Sea.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why dams are built.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. reservoirs store wet-season/snowmelt water for release in dry periods; 2. controlled releases supply irrigation, homes and industry; 3. stored water drives turbines to generate HEP, 4. reservoir operation can reduce some flood peaks. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) "Dams are the best solution to water shortages in Pakistan." How far do you agree? Use Fig. C1 and your own knowledge. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: reservoirs store high-flow water for dry periods and controlled irrigation releases; dams generate HEP and can reduce some flood peaks; large storage can support cities and industry. Valid alternative view, limitation or disadvantage: reservoirs displace people, flood habitats and trap sediment; large dams are costly, lose capacity through siltation and cannot correct leakage or wasteful demand; efficient irrigation, recharge, small storage and conservation may be more suitable in some places. Relevant named evidence may include: Tarbela Dam; Mangla Dam; Indus Basin Irrigation System. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge dams as one important part of an integrated strategy, with suitability depending on cost, sediment, location and environmental impact. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.4 SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES A. SUSTAINABLE MANAGEMENT OF FORESTS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term afforestation.	1 × 1 mark: planting trees on land that was not previously forested. Other accurate equivalent wording should be credited.
Define the term reforestation.	1 × 1 mark: replanting trees in an area that was previously forested. Other accurate equivalent wording should be credited.
Name one government programme to increase forest cover in Pakistan.	1 × 1 mark: Ten Billion Tree Tsunami Programme (TBTTP). Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two benefits of forests.	Award 1 mark for each of any two valid points. Indicative content: timber and fuelwood; jobs, tourism and forest products; soil and watershed protection; carbon storage; habitat and biodiversity; reduced runoff and flooding.
Give two causes of deforestation in Pakistan.	Award 1 mark for each of any two valid points. Indicative content: fuelwood collection; commercial logging; clearance for farming or settlement; overgrazing; roads and other infrastructure.
State two methods used to reduce deforestation.	Award 1 mark for each of any two valid points. Indicative content: afforestation and reforestation; controlled/selective logging and legal enforcement; community forestry; alternative fuels to fuelwood; grazing control and protected areas.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the importance of forests for the natural environment.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: coniferous forests occur mainly in the northern and north-western highlands; forests provide timber, fuelwood, grazing, tourism and employment; forests intercept rain, bind soil, store carbon and provide habitats; forests protect soil, water catchments, biodiversity and climate; tree planting cannot replace mature natural ecosystems quickly; afforestation is planting trees where there was not previously a forest; reforestation is replanting trees in a previously forested area; mangroves occur in the Indus Delta.
Describe the role of community forestry.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: local people help plant, monitor and protect trees; communities may receive jobs, fuelwood or income; local benefits reduce illegal cutting and improve long-term management.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the effects of deforestation on water resources.	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: less carbon dioxide is removed by photosynthesis; burning/decay releases stored carbon; reduced evapotranspiration may lower local rainfall; runoff, erosion and flood risk increase.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why afforestation helps reduce environmental problems.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. tree roots bind soil, so erosion and landslide risk fall; 2. canopy and leaf litter intercept rain and increase infiltration, so runoff and flood peaks fall; 3. growing trees remove carbon dioxide by photosynthesis and store carbon, reducing warming pressure; 4. new habitats provide food and shelter, so biodiversity can recover. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why deforestation increases flood risk.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. loss of canopy means less interception so rain reaches the ground faster; 2. loss of roots and vegetation reduces infiltration so surface runoff rises; 3. eroded sediment silts channels/reservoirs so their capacity falls. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why alternative energy sources can reduce deforestation.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. electricity, solar cookers or gas replace fuelwood so fewer trees are cut; 2. biogas uses animal/organic waste and reduces dependence on forest fuel; 3. reliable affordable energy removes pressure on households to collect wood. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the effectiveness of government measures to reduce deforestation.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: afforestation and reforestation restore tree cover and carbon storage; protected areas, quotas and enforcement can reduce illegal cutting; community forestry gives local people income and responsibility, improving monitoring; alternative fuels reduce household demand for fuelwood. Valid alternative/qualification: young trees take years to provide mature-forest functions; weak enforcement, grazing, fire and fuel poverty can reduce survival and effectiveness. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangrove restoration; community forestry in northern Pakistan. Supported judgement: judge measures by long-term survival, enforcement and community benefit rather than the number of seedlings planted. Other accurate, relevant material must be credited.
Assess the importance of forests for sustainable development.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: sustainably managed forests provide renewable timber, fuel and jobs without exhausting the resource; roots and canopy protect soil, catchments and reservoirs, supporting farming and HEP, forests store carbon and protect biodiversity and tourism livelihoods. Valid alternative/qualification: strict protection can restrict local access and plantations take time to mature; benefits are lost where illegal cutting, fire, grazing or weak community participation continue. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves; community forestry; Ten Billion Tree Tsunami Programme. Supported judgement: judge forests important because they link environmental protection with livelihoods, provided harvest and replanting are genuinely sustainable. Other accurate, relevant material must be credited.

8-mark questions

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Deforestation is the main cause of environmental degradation in Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: deforestation removes roots and canopy, increasing erosion, runoff and flood risk; habitat loss reduces biodiversity and burning or decay releases stored carbon; forest loss can silt reservoirs and reduce water storage and HEP. Valid alternative view, limitation or disadvantage: water and air pollution, land degradation and climate hazards are also serious environmental issues; the severity of deforestation varies by region and can be reduced by effective management. Relevant named evidence may include: northern coniferous forests; Indus Delta mangroves; Tarbela reservoir catchment; Ten Billion Tree Tsunami Programme. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: compare the scale, duration and number of people or ecosystems affected before deciding whether deforestation is the main issue. Credit any other accurate, relevant and developed argument.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Evaluate the effectiveness of sustainable forestry practices in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: afforestation and reforestation restore tree cover and carbon storage; protected areas, quotas and enforcement can reduce illegal cutting; community forestry gives local people income and responsibility, improving monitoring; alternative fuels reduce household demand for fuelwood. Valid alternative view, limitation or disadvantage: young trees take years to provide mature-forest functions; weak enforcement, grazing, fire and fuel poverty can reduce survival and effectiveness. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangrove restoration; community forestry in northern Pakistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge measures by long-term survival, enforcement and community benefit rather than the number of seedlings planted. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION FIG. A1 SHOWS THE EFFECTS OF DEFORESTATION ON WATER RESOURCES (FLOW DIAGRAM ON PAGE 6).

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one effect of deforestation shown in Fig. A1. [1]	1 × 1 mark: award 1 mark for an accurate identification taken directly from the named figure/resource. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the process shown in Fig. A1. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why deforestation leads to reduced hydroelectric power. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. erosion raises sediment loads which silt reservoirs and reduce storage; 2. silt damages/blocks intakes and turbines, lowering efficiency; 3. greater rapid runoff gives less regulated dry-season flow for generation. Credit any other accurate chain that explains how or why the stated outcome occurs.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of managing forests sustainably. Use Fig. A1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: afforestation and reforestation restore tree cover and carbon storage; protected areas, quotas and enforcement can reduce illegal cutting; community forestry gives local people income and responsibility, improving monitoring; alternative fuels reduce household demand for fuelwood. Valid alternative view, limitation or disadvantage: young trees take years to provide mature-forest functions; weak enforcement, grazing, fire and fuel poverty can reduce survival and effectiveness. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangrove restoration; community forestry in northern Pakistan. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge measures by long-term survival, enforcement and community benefit rather than the number of seedlings planted. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3

SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES B. SUSTAINABLE MANAGEMENT OF MINING AREAS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term sustainable mining.	1 × 1 mark: extracting minerals while limiting environmental and social damage and restoring land for future use. Other accurate equivalent wording should be credited.
Name one environmental problem caused by mining.	1 × 1 mark: dust/noise pollution, water pollution, habitat loss, soil erosion, unstable spoil or landscape scarring. Other accurate equivalent wording should be credited.
Name one method used to control pollution in mining areas.	1 × 1 mark: treat mine water, contain tailings, suppress dust, line waste ponds or dispose of waste safely. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two environmental impacts of mining.	Award 1 mark for each of any two valid points. Indicative content: dust and noise pollution; water contamination from waste; habitat and vegetation loss; soil erosion and unstable spoil; landscape scarring.
Give two ways to reduce pollution in mining.	Award 1 mark for each of any two valid points. Indicative content: treat polluted mine water; contain/line tailings and waste ponds; suppress dust with water and covers; monitor discharges and enforce limits; dispose of waste safely.
State two methods of land reclamation.	Award 1 mark for each of any two valid points. Indicative content: backfill pits; grade and stabilise spoil heaps; replace topsoil; replant native vegetation; monitor restored land.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of mining on the environment.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: dust and noise pollution; water contamination from waste; habitat and vegetation loss; soil erosion and unstable spoil; landscape scarring.
Describe how land can be restored after mining.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: backfill pits; grade and stabilise spoil heaps; replace topsoil; replant native vegetation; monitor restored land.
Describe the importance of monitoring mining activities.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: detects illegal extraction and pollution; checks compliance with environmental limits; requires treatment/reclamation; protects workers and nearby communities.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why mining affects human health.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. fine dust causes respiratory illness; 2. polluted drinking water exposes people to toxic chemicals/heavy metals; 3. noise, blasting and unstable pits cause stress, injury or death. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why land reclamation improves sustainability.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. backfilling and grading stabilise slopes and reduce erosion; 2. replacing topsoil and vegetation restores habitats and future land use; 3. treating waste prevents long-term soil and water pollution. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why environmental laws are important in mining.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. limits and monitoring force firms to control dust, water and waste pollution; 2. reclamation bonds/penalties make companies restore land; 3. worker and community standards reduce health and safety risks. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the environmental impacts of mining in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: vegetation clearance and open pits destroy habitats and scar land; blasting and crushing create dust and noise; mine waste and drainage can pollute soil and water. Valid alternative/qualification: mining provides raw materials, jobs, export income and infrastructure; regulation, waste treatment and reclamation can reduce damage. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; Reko Diq. Supported judgement: weigh the duration and reversibility of environmental harm against the distribution and size of economic benefits. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of sustainable mining practices.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: backfilling, grading, replacing topsoil and revegetation restore safer future land use; lined tailings storage and mine-water treatment reduce contamination; environmental monitoring, licences and penalties can enforce standards. Valid alternative/qualification: resources remain non-renewable; controls are costly and enforcement may be weak, especially for small or illegal workings; even reclaimed land may not restore the original ecosystem. Relevant named evidence may include: Saindak copper-gold; Reko Diq; Khewra rock salt; Muslim Bagh chromite. Supported judgement: judge sustainability from resource efficiency, pollution control, reclamation and whether local communities receive lasting benefits. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Mining activities cause more harm than benefit in Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: vegetation clearance and open pits destroy habitats and scar land; blasting and crushing create dust and noise; mine waste and drainage can pollute soil and water. Valid alternative view, limitation or disadvantage: mining provides raw materials, jobs, export income and infrastructure; regulation, waste treatment and reclamation can reduce damage. Relevant named evidence may include: Khewra rock salt; Muslim Bagh chromite; Saindak copper-gold; Reko Diq. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: weigh the duration and reversibility of environmental harm against the distribution and size of economic benefits. Credit any other accurate, relevant and developed argument.
Evaluate the effectiveness of strategies used to reduce environmental damage from mining. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: backfilling, grading, replacing topsoil and revegetation restore safer future land use; lined tailings storage and mine-water treatment reduce contamination; environmental monitoring, licences and penalties can enforce standards. Valid alternative view, limitation or disadvantage: resources remain non-renewable; controls are costly and enforcement may be weak, especially for small or illegal workings; even reclaimed land may not restore the original ecosystem. Relevant named evidence may include: Saindak copper-gold; Reko Diq; Khewra rock salt; Muslim Bagh chromite. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge sustainability from resource efficiency, pollution control, reclamation and whether local communities receive lasting benefits. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION FIG. B1 SHOWS MEASURES USED TO CONTROL POLLUTION AND RESTORE MINING AREAS (PAGE 7–8).

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one method used to control water pollution in mining. [1]	1 × 1 mark: a non-renewable resource is used faster than it is naturally replaced. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the methods shown in Fig. B1. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why these methods reduce environmental damage. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. treating mine water removes pollutants before discharge; 2. containing tailings prevents toxic leakage; 3. backfilling/revegetation stabilises soil and restores habitat; 4. dust suppression improves air quality. Credit any other accurate chain that explains how or why the stated outcome occurs.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the sustainability of mining in Pakistan. Use Fig. B1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: backfilling, grading, replacing topsoil and revegetation restore safer future land use; lined tailings storage and mine-water treatment reduce contamination; environmental monitoring, licences and penalties can enforce standards. Valid alternative view, limitation or disadvantage: resources remain non-renewable; controls are costly and enforcement may be weak, especially for small or illegal workings; even reclaimed land may not restore the original ecosystem. Relevant named evidence may include: Saindak copper-gold; Reko Diq; Khewra rock salt; Muslim Bagh chromite. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge sustainability from resource efficiency, pollution control, reclamation and whether local communities receive lasting benefits. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.4

SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES C. SUSTAINABLE MANAGEMENT OF WATER RESOURCES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term water security.	1 × 1 mark: reliable access to enough safe water for people, livelihoods and development. Other accurate equivalent wording should be credited.
Name one major dam in Pakistan.	1 × 1 mark: Tarbela or Mangla. Other accurate equivalent wording should be credited.
Name one problem caused by irrigation.	1 × 1 mark: waterlogging, salinity, leakage or water-borne disease. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two uses of dams.	Award 1 mark for each of any two valid points. Indicative content: store water for dry periods; supply irrigation and towns; generate hydroelectric power; regulate some floods.
Give two causes of water shortages.	Award 1 mark for each of any two valid points. Indicative content: irrigation and livestock; domestic drinking and sanitation; industry; hydroelectric power.
State two problems caused by irrigation.	Award 1 mark for each of any two valid points. Indicative content: canal leakage; waterlogging; salinity; unequal supply or siltation; water loss by evaporation.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the importance of dams.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: store water for dry periods; supply irrigation and towns; generate hydroelectric power; regulate some floods.
Describe the impacts of barrages on agriculture.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: divert reliable irrigation water to fields; extend cultivated area and allow multiple cropping; raise output in dry regions; may cause waterlogging/ salinity or reduce downstream flow.
Describe problems in irrigation systems.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: canal leakage; waterlogging; salinity; unequal supply or siltation; water loss by evaporation.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why dams help economic development.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. irrigation raises crop output and supplies agro-industry; 2. HEP provides electricity for homes and factories; 3. flood regulation reduces damage costs; 4. construction and related activity create jobs. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why irrigation systems can be inefficient.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. unlined canals leak so less water reaches farms; 2. open channels lose water through evaporation; 3. poor maintenance/silt/blockages reduce flow; 4. flood irrigation applies more water than crops need. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why waterlogging and salinity occur.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. canal leakage and over-irrigation raise the water table, saturating root zones; 2. poor drainage prevents excess water from escaping; 3. evaporation draws dissolved salts to the surface where they accumulate. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of irrigation in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: irrigation makes farming possible where rainfall is low or unreliable; reliable water permits higher yields, dry-season cultivation and cash crops; efficient drip, sprinkler and lined-channel systems reduce leakage and overwatering. Valid alternative/qualification: poorly managed irrigation causes waterlogging and salinity; modern systems need capital, maintenance and farmer training; water allocation and crop choice also affect sustainability. Relevant named evidence may include: Indus Basin Irrigation System; Sukkur Barrage; drip irrigation. Supported judgement: judge importance or effectiveness by water saved and sustained crop output without worsening salinity or inequality. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the causes of water shortages in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: population, urban growth, industry and irrigation increase demand; variable monsoon rain, drought and changing snow or glacier melt make supply unreliable; leakage, inefficient irrigation, pollution and limited storage reduce usable supply. Valid alternative/qualification: management measures such as conservation, treatment, efficient irrigation, recharge and appropriately located storage can reduce shortages; other national challenges such as energy, poverty and climate hazards may be more severe depending on place and time. Relevant named evidence may include: Indus Basin Irrigation System; Tarbela and Mangla; drip irrigation; rainwater harvesting. Supported judgement: judge the main cause or best strategy by scale, cost and long-term reliability; recognise that supply and demand measures must work together. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Dams are the best solution to water shortages in Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: reservoirs store high-flow water for dry periods and controlled irrigation releases; dams generate HEP and can reduce some flood peaks; large storage can support cities and industry. Valid alternative view, limitation or disadvantage: reservoirs displace people, flood habitats and trap sediment; large dams are costly, lose capacity through siltation and cannot correct leakage or wasteful demand; efficient irrigation, recharge, small storage and conservation may be more suitable in some places. Relevant named evidence may include: Tarbela Dam; Mangla Dam; Indus Basin Irrigation System. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge dams as one important part of an integrated strategy, with suitability depending on cost, sediment, location and environmental impact. Credit any other accurate, relevant and developed argument.
Evaluate the effectiveness of sustainable irrigation methods in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: irrigation makes farming possible where rainfall is low or unreliable; reliable water permits higher yields, dry-season cultivation and cash crops; efficient drip, sprinkler and lined-channel systems reduce leakage and overwatering. Valid alternative view, limitation or disadvantage: poorly managed irrigation causes waterlogging and salinity; modern systems need capital, maintenance and farmer training; water allocation and crop choice also affect sustainability. Relevant named evidence may include: Indus Basin Irrigation System; Sukkur Barrage; drip irrigation. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge importance or effectiveness by water saved and sustained crop output without worsening salinity or inequality. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION FIG. C1 SHOWS THE IMPACTS OF DAMS (TABLE ON PAGE 11).

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one positive impact of dams. [1]	1 × 1 mark: water storage, irrigation supply, HEP, flood regulation or employment. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the impacts shown in Fig. C1. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why dams can cause environmental problems. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. reservoirs flood habitats and farmland; 2. trapped sediment reduces downstream soil fertility and reservoir life; 3. changed flow blocks fish movement and harms downstream ecosystems; 4. standing water may increase disease and salinity. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate whether dams are sustainable in Pakistan. Use Fig. C1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: reservoirs store high-flow water for dry periods and controlled irrigation releases; dams generate HEP and can reduce some flood peaks; large storage can support cities and industry. Valid alternative view, limitation or disadvantage: reservoirs displace people, flood habitats and trap sediment; large dams are costly, lose capacity through siltation and cannot correct leakage or wasteful demand; efficient irrigation, recharge, small storage and conservation may be more suitable in some places. Relevant named evidence may include: Tarbela Dam; Mangla Dam; Indus Basin Irrigation System. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge dams as one important part of an integrated strategy, with suitability depending on cost, sediment, location and environmental impact. Credit any other accurate, relevant and developed argument.

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UNIT 1.1.4 AINABLE MANAGEMENT OF NATURAL RESOURCES D. WATER POLLUTION AND WATER SECURITY

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term water pollution.	1 × 1 mark: contamination of water that makes it harmful or unsuitable for use. Other accurate equivalent wording should be credited.
Name one source of water pollution.	1 × 1 mark: untreated sewage, industrial effluent, agricultural chemicals or solid waste. Other accurate equivalent wording should be credited.
Name one method of reducing pollution.	1 × 1 mark: sewage/effluent treatment, regulation, monitoring or safe waste disposal. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two causes of water pollution.	Award 1 mark for each of any two valid points. Indicative content: irrigation and livestock; domestic drinking and sanitation; industry; hydroelectric power.
Give two ways to reduce water pollution.	Award 1 mark for each of any two valid points. Indicative content: treat sewage and industrial effluent; enforce discharge standards; reduce/target agricultural chemicals; safe solid-waste disposal; monitor water quality.
State two impacts of polluted water.	Award 1 mark for each of any two valid points. Indicative content: water-borne disease; unsafe drinking water; eutrophication and fish death; higher treatment costs; less usable water.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the causes of water pollution.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: irrigation and livestock; domestic drinking and sanitation; industry; hydroelectric power.
Describe the importance of water security.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: safe drinking water and health; reliable irrigation and food supply; industrial production and jobs; energy generation; reduced conflict and vulnerability.
Describe the impacts of pollution on water supply.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: water-borne disease; unsafe drinking water; eutrophication and fish death; higher treatment costs; less usable water.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why industrial pollution affects water quality.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. untreated chemicals/heavy metals make water toxic; 2. hot or oxygen-demanding effluent reduces dissolved oxygen and kills aquatic life; 3. polluted supply becomes unsafe and more costly to treat. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why water security is important for development.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. reliable irrigation supports food production and farm income; 2. safe domestic water reduces illness and improves productivity/education; 3. industry and HEP require dependable water supplies. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why sewage treatment improves water quality.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. screening/settling removes solids; 2. biological treatment reduces organic waste and oxygen demand; 3. disinfection kills pathogens so disease risk falls. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the causes of water pollution in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: untreated sewage adds pathogens and organic waste; industrial effluent adds toxic chemicals and heavy metals; fertiliser, pesticide and solid-waste runoff enters rivers and groundwater. Valid alternative/qualification: the dominant source differs between urban, industrial and rural areas; weak treatment and enforcement turn sources into a larger problem. Relevant named evidence may include: urban sewage entering the Ravi; industrial areas of Karachi; Indus Basin agricultural runoff. Supported judgement: identify which source contributes most in the stated area and explain why treatment or regulation is inadequate. Other accurate, relevant material must be credited.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of water security.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: reliable safe water protects health and labour productivity; irrigation security supports food supply, farm income and agro-industry; industry and HEP require dependable water, while reliable supply reduces conflict and disruption. Valid alternative/qualification: water infrastructure is costly and unequal access may continue; development also depends on energy, skills, markets and governance. Relevant named evidence may include: Indus Basin Irrigation System; Tarbela and Mangla; municipal water-treatment systems. Supported judgement: judge water security a basic condition for development, with quality, access and reliability as important as total quantity. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Water pollution is the main threat to water security in Pakistan." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: sewage introduces pathogens, making supplies unsafe and spreading disease; industrial chemicals and agricultural runoff damage ecosystems and raise treatment costs; pollution reduces the quantity of water that can be used without expensive treatment. Valid alternative view, limitation or disadvantage: physical scarcity from drought, population growth, over-abstraction, leakage and inefficient irrigation may remove more water; storage, unequal access and transboundary management also affect security. Relevant named evidence may include: urban sewage entering the Ravi; industrial areas of Karachi; Indus Basin agricultural runoff. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the main threat by place: pollution may dominate water quality near cities, while shortage and inefficient use dominate many arid and farming areas. Credit any other accurate, relevant and developed argument.
Evaluate the effectiveness of methods used to improve water security in Pakistan. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: sewage and effluent treatment increase the amount of safe usable water; monitoring and enforcement prevent contamination; efficient irrigation, storage and recharge improve reliability while conservation reduces demand. Valid alternative view, limitation or disadvantage: treatment is costly and enforcement may be weak; drought, population growth, leakage and unequal access can threaten security even if pollution falls. Relevant named evidence may include: Indus River; municipal treatment plants; drip irrigation; rainwater harvesting. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge effectiveness by safe supply reaching users reliably, not simply by infrastructure being built. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION: FIG. D1 SHOWS INFORMATION ABOUT THE INDUS WATERS TREATY (PAGE 10).

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Name one river controlled by Pakistan under the treaty. [1]	1 × 1 mark: Indus, Jhelum or Chenab. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the main features of the treaty. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: signed in 1960; Pakistan mainly uses the Indus, Jhelum and Chenab; India mainly uses the Ravi, Beas and Sutlej; Permanent Indus Commission supports information exchange and dispute management.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why the treaty was important for Pakistan. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. allocation of the Indus, Jhelum and Chenab gave Pakistan a more predictable supply for irrigation and HEP planning; 2. the Permanent Indus Commission created communication and dispute procedures, reducing the risk of unilateral action; 3. reliable western-river flows support food and energy security for users in the Indus Basin. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of the Indus Waters Treaty for Pakistan today. Use Fig. D1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: the 1960 treaty gives Pakistan rights mainly over the Indus, Jhelum and Chenab, making irrigation and HEP planning more predictable; the Permanent Indus Commission provides data exchange and a process for discussing disputes; continued rules-based cooperation supports food, water and energy security. Valid alternative view, limitation or disadvantage: political tensions and disagreements over upstream projects remain; the treaty does not fully address climate change, groundwater or rising demand. Relevant named evidence may include: Indus Waters Treaty 1960; Indus; Jhelum; Chenab; Permanent Indus Commission. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge that the treaty remains essential as a framework, but needs effective cooperation and wider water management to meet current pressures. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.1

CLIMATE OF PAKISTAN
A. WEATHER CLIMATE AND DATA

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define the term weather.	1 × 1 mark: the condition of the atmosphere at a particular place and time. Other accurate equivalent wording should be credited.
Define the term climate.	1 × 1 mark: the long-term average pattern of weather in an area, normally measured over about 30 years. Other accurate equivalent wording should be credited.
State one element of weather.	1 × 1 mark: temperature, precipitation, wind, pressure, humidity or sunshine. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two differences between weather and climate.	Award 1 mark for each of any two valid points. Indicative content: weather is short-term while climate is a long-term average; weather describes current conditions while climate describes typical patterns; weather changes quickly while climate is calculated from many years of records.
Give two elements of climate.	Award 1 mark for each of any two valid points. Indicative content: temperature; precipitation; wind; air pressure; humidity; sunshine.
State two types of precipitation.	Award 1 mark for each of any two valid points. Indicative content: rain; snow; hail; sleet.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how mean daily temperature is calculated.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: add the temperature readings for the day; divide by the number of readings; state the answer in °C.
Describe how temperature range is calculated.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: identify the highest and lowest temperatures; subtract the lowest from the highest; state the answer in °C; award method and correct answer using the supplied data.
Describe the difference between monthly and annual average temperature.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: monthly average uses readings for one month; annual average uses all twelve monthly means/the whole year; both are calculated by adding values and dividing by their number.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why climate is measured over a long period.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. many years smooth unusual short-term weather events; 2. long records reveal the typical seasonal pattern; 3. trends and variability can be compared reliably. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why temperature data can be used to describe climate.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. monthly means show seasonal heating and cooling; 2. maximum/minimum values and range show extremes and continentality; 3. long-term averages allow comparison between places. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the usefulness of climate data in understanding weather patterns. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: long records show typical seasonal patterns, variability and trends; comparing stations helps identify regional differences; data supports farming, water, energy and hazard planning. Valid alternative/qualification: short or incomplete records may be unrepresentative; station location, measurement error and averages can hide local extremes. Relevant named evidence may include: temperature and rainfall graphs; a climate normal of about 30 years. Supported judgement: judge usefulness from record length, accuracy, spatial coverage and whether several climate elements are included. Other accurate, relevant material must be credited.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Temperature data alone is sufficient to describe the climate of a region." How far do you agree with this statement? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: mean temperature shows the general level of warmth; monthly values show seasonality and annual range; maximum and minimum values identify heat and cold extremes. Valid alternative view, limitation or disadvantage: climate also requires precipitation, humidity, wind and sunshine over a long period; averages may hide extremes and local variation. Relevant named evidence may include: temperature and rainfall climate graph; a climate normal of about 30 years. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: reject or qualify 'alone': temperature is essential but not sufficient to describe climate. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION: FIG. A1 SHOWS DAILY TEMPERATURE DATA FOR JANUARY 2025.

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) State the maximum temperature on 2 January. [1]	1 × 1 mark: award 1 mark for the correct maximum read from Fig. A1, including the unit °C. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Calculate the temperature range for a given day. [2]	Award 1 mark for each of any two valid points. Indicative content: identify the highest and lowest temperatures; subtract the lowest from the highest; state the answer in °C; award method and correct answer using the supplied data.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Describe the pattern shown in Fig. A1. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit the overall pattern/trend; credit a valid comparison or change over time; credit a peak, trough or anomaly; reserve one mark for accurate evidence read from the named figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Explain two reasons for the winter climate conditions shown by the data. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low winter sun angle reduces solar heating; 2. continental interiors cool rapidly away from the sea; 3. high altitude makes northern/western areas colder; 4. cloud, winds and western depressions modify local conditions; use the data. Credit any other accurate chain that explains how or why the stated outcome occurs.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(e) Evaluate the usefulness of short-term data for climate study. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: daily or monthly data reveals extremes, short weather events and recent variability; it is useful for warnings and can be compared with a long-term normal. Valid alternative view, limitation or disadvantage: one month or year may be anomalous and cannot establish a climate average; one station or temperature alone omits spatial variation and other elements such as rainfall and humidity. Relevant named evidence may include: Fig. A1 January 2025 temperatures; a climate normal of about 30 years. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge short-term data useful for weather and anomalies, but inadequate for climate unless placed within a long, multi-variable record. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.1

CLIMATE OF PAKISTAN B. TEMPERATURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define temperature range.	1 × 1 mark: the highest temperature minus the lowest temperature for a stated period. Other accurate equivalent wording should be credited.
Define annual average temperature.	1 × 1 mark: the mean of temperature readings across the twelve months of a year. Other accurate equivalent wording should be credited.
Name one temperature category.	1 × 1 mark: accept the category used in the prescribed resource, such as cool, warm, hot or very hot. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of hot climates.	Award 1 mark for each of any two valid points. Indicative content: high average and maximum temperatures; long hot summers; high evaporation; often mild winters and low rainfall in inland lowlands.
Give two areas with very high temperatures.	Award 1 mark for each of any two valid points. Indicative content: low latitude gives more direct solar energy; low altitude and clear skies allow strong heating; inland land surfaces heat quickly and lack the sea's moderating effect; dry ground gives little evaporative cooling.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the distribution of temperature categories in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: lowest/cool categories occur in the northern highlands; moderate categories occur in uplands and foothills; hot/very hot categories dominate southern and inland lowlands; temperatures generally rise southwards and with decreasing altitude.
Describe the characteristics of very hot regions.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: high average and maximum temperatures; long hot summers; high evaporation; often mild winters and low rainfall in inland lowlands.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why some areas experience very high temperatures.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low latitude gives more direct solar energy; 2. low altitude and clear skies allow strong heating; 3. inland land surfaces heat quickly and lack the sea's moderating effect; 4. dry ground gives little evaporative cooling. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why hot and cold regions differ.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. latitude changes the angle/intensity of solar energy; 2. temperature falls with altitude; 3. the sea moderates coastal areas while inland areas have greater extremes; 4. cloud, aspect and air masses create local differences. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess how temperature varies across Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: temperature falls with altitude, making Murree and northern highlands cooler; lower latitude gives stronger solar heating in the south; the sea moderates Karachi while inland places such as Sukkur have larger extremes. Valid alternative/qualification: cloud, aspect, vegetation, urbanisation and seasonal air masses also affect temperature; the most important factor changes between a highland-lowland and coast-inland comparison. Relevant named evidence may include: Murree; Sukkur; Karachi; Quetta. Supported judgement: select the factor that best explains the named contrast and show why alternatives are less important there. Other accurate, relevant material must be credited.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Temperature variation is mainly due to physical factors." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: altitude lowers temperatures in Murree and northern highlands; latitude changes solar angle, while the Arabian Sea moderates Karachi and inland areas have greater extremes. Valid alternative view, limitation or disadvantage: urban surfaces, waste heat, deforestation and human-driven climate change also modify temperatures; cloud and short-term air masses can obscure the broad physical pattern. Relevant named evidence may include: Murree; Sukkur; Karachi; Lahore urban heat island. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge physical factors dominant for Pakistan's broad spatial pattern, while human influence is increasingly important locally and over time. Credit any other accurate, relevant and developed argument.

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SOURCE-BASED QUESTION: FIG. TEMPERATURE CATEGORIES ON PAGE 3

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one area with temperatures above 40°C. [1]	1 × 1 mark: accept an accurately identified area from the prescribed map, such as the lower Indus Plain/interior Sindh where shown. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the temperature categories shown. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: lowest/cool categories occur in the northern highlands; moderate categories occur in uplands and foothills; hot/very hot categories dominate southern and inland lowlands; temperatures generally rise southwards and with decreasing altitude.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why some areas fall into the 'very hot' category. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low latitude gives more direct solar energy; 2. low altitude and clear skies allow strong heating; 3. inland land surfaces heat quickly and lack the sea's moderating effect; 4. dry ground gives little evaporative cooling. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate how useful such categories are in understanding climate. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: categories or maps summarise large spatial patterns and make regions easy to compare; they can identify cooler highlands, hotter lowlands and broad planning zones. Valid alternative view, limitation or disadvantage: class boundaries simplify continuous variation and may hide altitude, urban and seasonal differences; usefulness depends on date, scale, key and data quality. Relevant named evidence may include: Murree or northern highlands; Sukkur and the Indus Plain; Karachi coast. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the resource useful for overview but insufficient without station data and seasonal information. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.1

CLIMATE OF PAKISTAN
C. RAINFALL AND CLIMATE TYPES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define arid climate.	1 × 1 mark: a climate with very low and unreliable rainfall, usually with evaporation exceeding precipitation. Other accurate equivalent wording should be credited.
Define humid climate.	1 × 1 mark: a climate with relatively high atmospheric moisture and rainfall. Other accurate equivalent wording should be credited.
State one rainfall category.	1 × 1 mark: accept a category used in the prescribed resource, such as extremely arid, arid, semi-arid, sub-humid or humid. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of arid regions.	Award 1 mark for each of any two valid points. Indicative content: low and unreliable rainfall; high evaporation; sparse drought-resistant vegetation; frequent drought and dependence on irrigation/grazing.
Give two areas with high rainfall.	Award 1 mark for each of any two valid points. Indicative content: Murree and Himalayan foothills; north-east Punjab; parts of Khyber Pakhtunkhwa and the northern highlands.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe rainfall distribution in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: rainfall is highest in the north-east and northern highlands; it generally decreases towards the south and west; western Balochistan and the south-east are very dry; monsoon rain dominates summer in the east while western depressions bring winter rain to the north and west.
Describe characteristics of semi-arid regions.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: low and unreliable rainfall; high evaporation; sparse drought-resistant vegetation; frequent drought and dependence on irrigation/grazing.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why rainfall varies across Pakistan.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. monsoon moisture mainly reaches the east/north-east and weakens westward; 2. mountains cause uplift on windward slopes and rain shadows leeward; 3. distance from the sea reduces moisture inland; 4. western depressions mainly affect northern/western Pakistan in winter. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why low rainfall affects human activities.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. water scarcity limits crops and livestock; 2. settlement and industry remain sparse where supply is unreliable; 3. people depend more on irrigation, wells or migration. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of rainfall for agriculture.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: rain supplies soil moisture for germination and crop growth; rain supports pasture and livestock and can reduce irrigation demand; seasonal rain replenishes rivers, reservoirs and groundwater used by farms. Valid alternative/qualification: rainfall is uneven and unreliable, while excessive rain causes waterlogging, erosion and crop loss; temperature, soils, irrigation and farm inputs also control output. Relevant named evidence may include: monsoon rain in Punjab; Murree; Nok Kundi; Indus irrigation. Supported judgement: judge rainfall most important for rain-fed farming, but less decisive where reliable irrigation is available. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Rainfall is the most important factor affecting climate in Pakistan." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: rainfall controls water availability, vegetation, crop potential and drought or flood risk; monsoon and relief rainfall support farming and reservoirs in the north-east. Valid alternative view, limitation or disadvantage: temperature, altitude and distance from the sea also define climate; rainfall is highly variable and irrigation may reduce dependence on it. Relevant named evidence may include: Murree; Nok Kundi; north-east Punjab; western Balochistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge rainfall important for water and vegetation, but compare it with temperature and physical controls for the exact region. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION (RAINFALL TABLE – PAGE 4)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one extremely arid area. [1]	1 × 1 mark: western Balochistan/Nok Kundi, the Kharan area or another correct area shown. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe rainfall patterns shown. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: rainfall is highest in the north-east and northern highlands; it generally decreases towards the south and west; western Balochistan and the south-east are very dry; monsoon rain dominates summer in the east while western depressions bring winter rain to the north and west.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why rainfall is low in some regions. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. monsoon moisture mainly reaches the east/north-east and weakens westward; 2. mountains cause uplift on windward slopes and rain shadows leeward; 3. distance from the sea reduces moisture inland; 4. western depressions mainly affect northern/western Pakistan in winter. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impact of rainfall distribution on development. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: wetter northern and north-eastern areas have better rain-fed farming, forests, reservoirs and HEP potential; seasonal rainfall replenishes water for settlements, irrigation and industry. Valid alternative view, limitation or disadvantage: very low or unreliable rain restricts farming and settlement and raises irrigation cost; excessive rain causes floods, erosion and infrastructure damage; technology, soils, markets and irrigation can reduce the effect of rainfall distribution. Relevant named evidence may include: Murree and north-east Punjab; Nok Kundi and western Balochistan; Indus irrigation. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge rainfall distribution a major regional influence, but not a complete explanation of development where irrigation and investment alter opportunities. Credit any other accurate, relevant and developed argument.

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UNIT
1.2.1

CLIMATE OF PAKISTAN
D. CLIMATIC ZONES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define climatic zone.	1 × 1 mark: an area with broadly similar long-term temperature and rainfall characteristics. Other accurate equivalent wording should be credited.
Name one climatic zone in Pakistan.	1 × 1 mark: highland, lowland, arid/semi-arid or coastal climatic zone. Other accurate equivalent wording should be credited.
State one factor affecting climatic zones.	1 × 1 mark: latitude, altitude, distance from the sea, relief or prevailing winds. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of highland climate.	Award 1 mark for each of any two valid points. Indicative content: low temperatures, especially in winter, snow at high altitude; short cool summers; precipitation varies with relief and aspect.
Give two areas in the arid zone.	Award 1 mark for each of any two valid points. Indicative content: western Balochistan/Kharan/Nok Kundi; Thar and Cholistan deserts; parts of the lower Indus Plain.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the characteristics of coastal climate.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: temperatures moderated by the sea; smaller annual temperature range; higher humidity and sea breezes; generally low rainfall but exposed to cyclones.
Describe the distribution of lowland climate.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: covers most of the Indus Plain in Punjab and Sindh; extends southwards to the coast; hotter inland than at the coast; drier towards the south-west except where irrigated.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why highland areas are cooler.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. temperature falls with altitude because air pressure/density decrease; 2. high land is farther from heat re-radiated by the ground; 3. snow cover reflects solar energy and maintains low temperatures. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why arid and coastal climates differ.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. the sea heats and cools slowly, so coastal temperatures are moderated while inland arid areas have greater extremes; 2. onshore winds raise coastal humidity, whereas distant arid interiors receive little marine moisture; 3. coasts face sea breezes and cyclone rain, while arid interiors depend more on weak or irregular rainfall systems. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of climatic zones in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: zones summarise regional temperature and rainfall, helping farmers choose crops and planting seasons; they support planning for water, housing, energy demand, tourism and hazard risk; they explain regional differences in vegetation and livelihoods. Valid alternative/qualification: zone boundaries generalise local and seasonal variation; altitude, irrigation, technology and income can create different conditions within one zone. Relevant named evidence may include: northern highland zone; arid Balochistan; Indus Plain; Karachi coastal zone. Supported judgement: judge zones useful for broad planning but insufficient without local climate and socio-economic data. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Altitude is the most important factor affecting climatic zones." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: air temperature generally falls with height, so Murree, Quetta and northern mountains are cooler than low Indus areas; snow cover reflects solar energy and helps maintain lower highland temperatures; cooler highlands have shorter growing seasons than the low Indus Plain. Valid alternative view, limitation or disadvantage: latitude and solar angle, distance from the sea, cloud, winds and aspect also shape temperature or climatic zones. Relevant named evidence may include: Murree; Quetta; Sukkur; northern highlands. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge altitude dominant for highland-lowland differences, but not necessarily for coast-inland or north-south contrasts. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: (MAP – PAGE 10) FIG. D1 SHOWS CLIMATIC ZONES OF PAKISTAN.

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one coastal region. [1]	1 × 1 mark: Karachi coast, Indus Delta, Makran coast or another correct coastal region. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the distribution of climatic zones. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: highland/cool zones are in the north and north-west; hot lowland climate covers much of the Indus Plain; arid zones dominate western Balochistan and deserts; coastal climate forms a narrow southern belt.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why these zones differ. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. altitude lowers temperature, so northern highland zones are cooler than lowland zones; 2. distance from the Arabian Sea moderates coastal temperatures but inland zones have greater extremes; 3. monsoon and western-depression tracks distribute rainfall unevenly, creating humid and arid zones. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate how useful the map is for understanding climate patterns. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: categories or maps summarise large spatial patterns and make regions easy to compare; they can identify cooler highlands, hotter lowlands and broad planning zones. Valid alternative view, limitation or disadvantage: class boundaries simplify continuous variation and may hide altitude, urban and seasonal differences; usefulness depends on date, scale, key and data quality. Relevant named evidence may include: Murree or northern highlands; Sukkur and the Indus Plain; Karachi coast. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the resource useful for overview but insufficient without station data and seasonal information. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.1

CLIMATE OF PAKISTAN
E. FACTORS AFFECTING TEMPERATURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define latitude.	1 × 1 mark: angular distance north or south of the Equator. Other accurate equivalent wording should be credited.
Define altitude.	1 × 1 mark: height above sea level. Other accurate equivalent wording should be credited.
Define continental effect.	1 × 1 mark: greater temperature extremes inland because land heats and cools faster than the sea. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of latitude on temperature.	Award 1 mark for each of any two valid points. Indicative content: lower latitudes receive more direct solar radiation and are warmer; higher latitudes receive less direct radiation and are cooler; seasonal sun angle changes temperature through the year.
Give two effects of altitude.	Award 1 mark for each of any two valid points. Indicative content: temperature falls as altitude increases; highlands have cooler summers and colder/snowier winters; high altitude shortens the growing season.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how altitude affects temperature.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: temperature falls as altitude increases; highlands have cooler summers and colder/snowier winters; high altitude shortens the growing season.
Describe how distance from sea affects temperature.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: the sea heats and cools slowly; coastal summers are cooler and winters milder; coastal annual temperature range is smaller; inland areas have greater extremes.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why latitude affects temperature in Pakistan.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. lower latitudes receive more direct solar radiation and are warmer; 2. higher latitudes receive less direct radiation and are cooler; 3. seasonal sun angle changes temperature through the year. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why maritime influence affects coastal climates.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. temperatures moderated by the sea; 2. smaller annual temperature range; 3. higher humidity and sea breezes; 4. generally low rainfall but exposed to cyclones. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why cloud cover affects temperature.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. daytime cloud reflects incoming solar radiation so maximum temperature falls; 2. night cloud absorbs/re-radiates outgoing heat so minimum temperature is higher, 3. cloud therefore reduces the daily temperature range. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of altitude in controlling temperature.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: air temperature generally falls with height, so Murree, Quetta and northern mountains are cooler than low Indus areas; snow cover reflects solar energy and helps maintain lower highland temperatures; cooler highlands have shorter growing seasons than the low Indus Plain. Valid alternative/qualification: latitude and solar angle, distance from the sea, cloud, winds and aspect also shape temperature or climatic zones. Relevant named evidence may include: Murree; Quetta; Sukkur, northern highlands. Supported judgement: judge altitude dominant for highland-lowland differences, but not necessarily for coast-inland or north-south contrasts. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Distance from the sea is the main factor affecting temperature in Pakistan." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: the Arabian Sea heats and cools slowly, moderating Karachi's summers and winters; marine air and sea breezes reduce coastal extremes, while inland Sukkur has a larger range. Valid alternative view, limitation or disadvantage: altitude makes Murree and Quetta cooler, latitude, cloud, winds, aspect and urban surfaces also affect temperature. Relevant named evidence may include: Karachi; Sukkur, Murree; Quetta. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge distance from the sea strongest for coast-inland contrasts, but altitude stronger for highland-lowland contrasts. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: (DIAGRAM – PAGE 12)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify the angle at which sunlight is strongest. [1]	1 × 1 mark: the highest/most direct angle shown, closest to 90°. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the relationship between the angle of the Sun's rays and temperature. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: high/direct sun angle concentrates energy on a smaller area; a low angle spreads energy over a larger area and passes through more atmosphere; temperature is therefore higher with a more direct angle.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why latitude affects solar energy received. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. nearer the Equator rays strike more directly and concentrate energy; 2. at higher latitude rays arrive at a lower angle and spread energy over a larger area; 3. low-angle rays pass through more atmosphere and lose more energy. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of solar radiation in controlling climate. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: the angle and duration of sunshine control incoming energy and seasonal heating; latitude changes how concentrated solar energy is. Valid alternative view, limitation or disadvantage: altitude, cloud cover, distance from the sea, winds and surface cover modify the resulting temperature and rainfall. Relevant named evidence may include: southern Indus Plain; northern highlands; Karachi coast. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge solar radiation as the basic energy source, while local climate patterns depend strongly on modifying physical factors. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.1

CLIMATE OF PAKISTAN F. COMPARISON AND DATA INTERPRETATION

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one hotter location shown.	1 × 1 mark: Sukkur. Other accurate equivalent wording should be credited.
Name one cooler location shown.	1 × 1 mark: Murree. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two differences between Sukkur and Murree.	Award 1 mark for each of any two valid points. Indicative content: Sukkur is much hotter, especially in summer, Murree is cooler because of its higher altitude; Murree usually has more precipitation; Sukkur has a larger hot-season extreme and a drier lowland climate.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe differences in climate between Sukkur and Murree.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: Sukkur is much hotter, especially in summer, Murree is cooler because of its higher altitude; Murree usually has more precipitation; Sukkur has a larger hot-season extreme and a drier lowland climate.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why Sukkur is hotter than Murree.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. Murree's much greater altitude lowers temperature; 2. Sukkur's low inland location heats strongly and lacks maritime cooling; 3. local cloud/rainfall differences can reduce heating at Murree. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of physical factors in explaining these differences.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: temperature falls with altitude, making Murree and northern highlands cooler; lower latitude gives stronger solar heating in the south; the sea moderates Karachi while inland places such as Sukkur have larger extremes. Valid alternative/qualification: cloud, aspect, vegetation, urbanisation and seasonal air masses also affect temperature; the most important factor changes between a highland-lowland and coast-inland comparison. Relevant named evidence may include: Murree; Sukkur; Karachi; Quetta. Supported judgement: select the factor that best explains the named contrast and show why alternatives are less important there. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Altitude is the main reason for temperature differences in Pakistan." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: air temperature generally falls with height, so Murree, Quetta and northern mountains are cooler than low Indus areas; snow cover reflects solar energy and helps maintain lower highland temperatures; cooler highlands have shorter growing seasons than the low Indus Plain. Valid alternative view, limitation or disadvantage: latitude and solar angle, distance from the sea, cloud, winds and aspect also shape temperature or climatic zones. Relevant named evidence may include: Murree; Quetta; Sukkur; northern highlands. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge altitude dominant for highland-lowland differences, but not necessarily for coast-inland or north-south contrasts. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION (WINTER TEMPERATURE MAP – PAGE 16) FIG. F1 SHOWS WINTER TEMPERATURES IN PAKISTAN.

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one area with temperatures below 10°C. [1]	1 × 1 mark: the northern or north-western highlands, including Gilgit-Baltistan where shown. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the distribution of winter temperatures. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: lowest temperatures occur in northern and western highlands; temperatures rise towards southern lowlands and coast; altitude creates cooler pockets; coastal areas are milder because of the sea.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why temperatures vary across Pakistan. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. latitude changes the angle/intensity of solar energy; 2. temperature falls with altitude; 3. the sea moderates coastal areas while inland areas have greater extremes; 4. cloud, aspect and air masses create local differences. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the usefulness of the map in understanding climate. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: categories or maps summarise large spatial patterns and make regions easy to compare; they can identify cooler highlands, hotter lowlands and broad planning zones. Valid alternative view, limitation or disadvantage: class boundaries simplify continuous variation and may hide altitude, urban and seasonal differences; usefulness depends on date, scale, key and data quality. Relevant named evidence may include: Murree or northern highlands; Sukkur and the Indus Plain; Karachi coast. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the resource useful for overview but insufficient without station data and seasonal information. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS
A. CAUSES OF MONSOON WINDS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a monsoon? [1]	1 × 1 mark: a seasonal reversal in wind direction, often producing a wet and a dry season. Other accurate equivalent wording should be credited.
Name one source of monsoon winds affecting Pakistan. [1]	1 × 1 mark: Arabian Sea or Bay of Bengal. Other accurate equivalent wording should be credited.
State the direction of the primary summer monsoon. [1]	1 × 1 mark: from the east or south-east towards Pakistan. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of the summer monsoon. [2]	Award 1 mark for each of any two valid points. Indicative content: moist winds blow inland in summer; main flow approaches from east/south-east and the Arabian Sea; rain is heaviest in the north-east; rainfall is intense but variable.
Give two differences between primary and secondary monsoon winds. [2]	Award 1 mark for each of any two valid points. Indicative content: primary monsoon generally comes from the Bay of Bengal/east or south-east; secondary branch comes from the Arabian Sea/south-west; the primary branch mainly affects north-east/eastern Pakistan; the Arabian Sea branch mainly affects southern/coastal areas and may be weaker.
State two areas affected by the primary monsoon. [2]	Award 1 mark for each of any two valid points. Indicative content: north-east Punjab; Islamabad/Rawalpindi region; Khyber Pakhtunkhwa foothills; Azad Jammu and Kashmir.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how the summer monsoon develops. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: strong summer heating creates low pressure over the subcontinent; moist air is drawn from the Arabian Sea/Bay of Bengal; air rises, cools and condenses; heavy summer rain follows, especially in the north-east.
Describe the distribution of monsoon rainfall in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: heaviest in north-east Pakistan; decreases westwards and south-westwards; eastern Punjab and northern foothills receive more than Balochistan; southern/coastal areas receive variable rain from the Arabian Sea branch.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the characteristics of the winter monsoon. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: generally dry offshore winds from land to sea; cooler, denser air forms high pressure over the continent; much less moisture and rainfall than the summer monsoon.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why monsoon winds bring rainfall to Pakistan. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. winds cross warm seas and collect moisture; 2. summer low pressure draws moist air inland; 3. air rises through convection/relief, cools and condenses into rain. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of monsoon winds in controlling rainfall in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: monsoon rain supplies soil moisture for kharif crops; it replenishes rivers, reservoirs and groundwater used for irrigation and HEP; it provides much of the summer rain in eastern and northern Pakistan. Valid alternative/qualification: monsoon rain is uneven and variable and can cause floods, erosion and landslides; western depressions supply important winter rain and snow, especially in the north and west. Relevant named evidence may include: Punjab; Sindh; north-east Pakistan; 2022 Pakistan floods. Supported judgement: judge importance by region and season: monsoon dominates many summer totals, but is not the only rainfall source. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Monsoon winds are the main cause of rainfall in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: summer pressure differences draw moisture-bearing air from the Arabian Sea and Bay of Bengal; uplift and condensation produce much of the summer rain in eastern and northern Pakistan. Valid alternative view, limitation or disadvantage: western depressions bring winter rain and snow; relief, convection and cyclones also produce rainfall and the monsoon weakens towards the west. Relevant named evidence may include: north-east Punjab; Murree; western Balochistan; Arabian Sea and Bay of Bengal branches. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge monsoon the main national summer source, but its importance varies greatly by region and season. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: (MONSOON MAPS – PAGES 2–3)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify the direction of monsoon winds shown. [1]	1 × 1 mark: award 1 mark for an accurate identification taken directly from the named figure/resource. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the pattern of monsoon winds affecting Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: primary branch approaches from the east/south-east; another branch approaches from the Arabian Sea/south-west; winds converge inland and rainfall generally weakens westwards.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why monsoon winds cause rainfall. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. winds cross warm seas and collect moisture; 2. summer low pressure draws moist air inland; 3. air rises through convection/relief, cools and condenses into rain. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
d) Evaluate the importance of monsoon rainfall for Pakistan. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: monsoon rain supplies soil moisture for kharif crops; it replenishes rivers, reservoirs and groundwater used for irrigation and HEP, it provides much of the summer rain in eastern and northern Pakistan. Valid alternative view, limitation or disadvantage: monsoon rain is uneven and variable and can cause floods, erosion and landslides; western depressions supply important winter rain and snow, especially in the north and west. Relevant named evidence may include: Punjab; Sindh; north-east Pakistan; 2022 Pakistan floods. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge importance by region and season: monsoon dominates many summer totals, but is not the only rainfall source. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS B. CAUSES OF WESTERN DEPRESSIONS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a western depression? [1]	1 × 1 mark: a travelling low-pressure system from the west that brings winter rain and snow to Pakistan. Other accurate equivalent wording should be credited.
State the source of western depressions. [1]	1 × 1 mark: Mediterranean region. Other accurate equivalent wording should be credited.
State the direction of movement of western depressions. [1]	1 × 1 mark: from west to east. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of western depressions. [2]	Award 1 mark for each of any two valid points. Indicative content: low-pressure systems originate near the Mediterranean; travel east through Iran and Afghanistan; bring winter rain to western/northern Pakistan and snow to mountains; vary in strength and frequency.
Give two areas affected by western depressions. [2]	Award 1 mark for each of any two valid points. Indicative content: low-pressure systems originate near the Mediterranean; travel east through Iran and Afghanistan; bring winter rain to western/northern Pakistan and snow to mountains; vary in strength and frequency.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how western depressions develop. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: low-pressure systems originate near the Mediterranean; travel east through Iran and Afghanistan; bring winter rain to western/northern Pakistan and snow to mountains; vary in strength and frequency.
Describe their distribution in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: western depressions enter from the west; mainly affect Balochistan, Khyber Pakhtunkhwa, northern Punjab and the highlands; bring winter rain and mountain snow.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why western depressions bring rainfall to northern areas. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. the systems carry moisture eastwards from the Mediterranean region through Iran and Afghanistan; 2. northern and western mountains force moist air to rise, cool and condense as rain or snow; 3. they arrive in winter when cold highland air favours snowfall at altitude. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why rainfall from western depressions is reliable. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. systems follow a recurring west-to-east winter track; 2. moist air is forced over northern/western relief and condenses; 3. however frequency/intensity varies, so credit a qualified explanation. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of western depressions for Pakistan's climate. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: winter rain supports rabi crops such as wheat; mountain snow stores water that later feeds the Indus system; western and northern areas receive precipitation when the monsoon is weak. Valid alternative/qualification: amounts and frequency vary and totals are often below monsoon rainfall; heavy snow, rain and landslides can disrupt transport. Relevant named evidence may include: Balochistan; Khyber Pakhtunkhwa; northern Punjab; Himalaya and Karakoram. Supported judgement: judge western depressions vital for winter and western regions, while monsoons are usually more important nationally for summer rainfall. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Western depressions are more important than monsoons in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: winter rain supports rabi crops such as wheat; mountain snow stores water that later feeds the Indus system; western and northern areas receive precipitation when the monsoon is weak. Valid alternative view, limitation or disadvantage: amounts and frequency vary and totals are often below monsoon rainfall; heavy snow, rain and landslides can disrupt transport. Relevant named evidence may include: Balochistan; Khyber Pakhtunkhwa; northern Punjab; Himalaya and Karakoram. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge western depressions vital for winter and western regions, while monsoons are usually more important nationally for summer rainfall. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: (MAP – PAGE 5)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one area receiving rainfall from western depressions. [1]	1 × 1 mark: Balochistan, Khyber Pakhtunkhwa, northern Punjab or the northern highlands. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the distribution shown in the map. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: western depressions enter from the west; mainly affect Balochistan, Khyber Pakhtunkhwa, northern Punjab and the highlands; bring winter rain and mountain snow.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why rainfall occurs in these areas. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. western depressions carry winter moisture into northern and western Pakistan; 2. mountains force moist air to rise, cool and condense, increasing precipitation on windward slopes; 3. areas lying in the path of the system receive more rain or snow than sheltered leeward areas. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of western depressions in Pakistan. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: winter rain supports rabi crops such as wheat; mountain snow stores water that later feeds the Indus system; western and northern areas receive precipitation when the monsoon is weak. Valid alternative view, limitation or disadvantage: amounts and frequency vary and totals are often below monsoon rainfall; heavy snow, rain and landslides can disrupt transport. Relevant named evidence may include: Balochistan; Khyber Pakhtunkhwa; northern Punjab; Himalaya and Karakoram. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge western depressions vital for winter and western regions, while monsoons are usually more important nationally for summer rainfall. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS C. CONVECTIONAL AND RELIEF RAINFALL

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is convectional rainfall? [1]	1 × 1 mark: rain formed when heated air rises, cools, condenses and produces precipitation. Other accurate equivalent wording should be credited.
What is relief rainfall? [1]	1 × 1 mark: rain formed when moist air is forced to rise over high land, cools and condenses. Other accurate equivalent wording should be credited.
Define rain shadow. [1]	1 × 1 mark: a dry area on the leeward side of high land. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of convectional rainfall. [2]	Award 1 mark for each of any two valid points. Indicative content: strong surface heating warms moist air; air rises and expands; it cools to dew point and condenses; cumulonimbus clouds produce short, heavy showers.
State two characteristics of relief rainfall. [2]	Award 1 mark for each of any two valid points. Indicative content: moist air is forced up a mountain slope; rising air expands and cools; condensation gives rain on the windward side; descending leeward air warms and creates a rain shadow.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how convectional rainfall forms. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: strong surface heating warms moist air; air rises and expands; it cools to dew point and condenses; cumulonimbus clouds produce short, heavy showers.
Describe how relief rainfall forms. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: moist air is forced up a mountain slope; rising air expands and cools; condensation gives rain on the windward side; descending leeward air warms and creates a rain shadow.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why convectional rainfall is common in summer. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. strong surface heating warms moist air; 2. air rises and expands; 3. it cools to dew point and condenses; 4. cumulonimbus clouds produce short, heavy showers. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why mountains influence rainfall distribution. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. moist air is forced to rise over mountains; 2. rising air expands and cools to dew point; 3. condensation produces rain on windward slopes while descending leeward air creates a rain shadow. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of relief rainfall in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: uplift over northern hills cools moist air and produces heavy windward rain; this rain supplies farming, settlements and reservoirs; high rainfall supports forests and river or HEP flow. Valid alternative/qualification: rain shadows create dry leeward areas and intense relief rain can cause erosion, landslides and flash floods; monsoon circulation and western depressions supply the moisture, so relief is not an independent national cause. Relevant named evidence may include: Murree and Himalayan foothills; Balochistan rain-shadow areas. Supported judgement: judge relief most important locally on windward slopes, but atmospheric systems better explain the national and seasonal pattern. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Relief rainfall is the main cause of heavy rainfall in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: uplift over northern hills cools moist air and produces heavy windward rain; this rain supplies farming, settlements and reservoirs; high rainfall supports forests and river or HEP flow. Valid alternative view, limitation or disadvantage: rain shadows create dry leeward areas and intense relief rain can cause erosion, landslides and flash floods; monsoon circulation and western depressions supply the moisture, so relief is not an independent national cause. Relevant named evidence may include: Murree and Himalayan foothills; Balochistan rain-shadow areas. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge relief most important locally on windward slopes, but atmospheric systems better explain the national and seasonal pattern. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: (DIAGRAM – PAGE 6–7)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify the type of rainfall shown. [1]	1 × 1 mark: award 1 mark for an accurate identification taken directly from the named figure/resource. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the process shown in the diagram. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why rainfall is heavy on windward slopes. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. moist air is forced to rise over mountains; 2. rising air expands and cools to dew point; 3. condensation produces rain on windward slopes while descending leeward air creates a rain shadow. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impact of relief rainfall on human activities. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: windward rain supports water supply, farming, forests and tourism; runoff feeds streams, reservoirs and HEP. Valid alternative view, limitation or disadvantage: heavy rain causes erosion, landslides, flash floods and transport disruption; leeward rain shadows restrict farming and settlement. Relevant named evidence may include: Murree and Himalayan foothills; northern mountain roads; Balochistan rain-shadow areas. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge impacts positive where rainfall is moderate and managed, but damaging where intense rain meets steep slopes and exposed settlements. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS D. TROPICAL CYCLONES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a tropical cyclone? [1]	1 × 1 mark: an intense rotating low-pressure storm that develops over warm tropical seas. Other accurate equivalent wording should be credited.
State the source of cyclones affecting Pakistan. [1]	1 × 1 mark: Arabian Sea. Other accurate equivalent wording should be credited.
Name one area affected by cyclones. [1]	1 × 1 mark: coastal Sindh/Karachi or the Balochistan/Makran coast. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of tropical cyclones. [2]	Award 1 mark for each of any two valid points. Indicative content: intense rotating low-pressure systems; form over warm tropical seas; bring very strong winds and heavy rain; may cause storm surge and coastal flooding.
Give two effects of cyclones. [2]	Award 1 mark for each of any two valid points. Indicative content: strong winds damage buildings, crops and power lines; storm surge floods and salinises the coast; heavy rain causes flooding/landslides; people are killed, displaced or lose livelihoods.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how tropical cyclones develop. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: develop over very warm Arabian Sea water; rapid evaporation supplies moist rising air; condensation releases latent heat and deepens low pressure; winds spiral around the low-pressure centre.
Describe their distribution in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: cyclones approach from the Arabian Sea; mainly affect coastal Sindh and the Makran coast; tracks and frequency vary between years.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why cyclones form over warm seas. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. water above about 27°C supplies rapid evaporation and moist rising air; 2. condensation releases latent heat which deepens low pressure; 3. the Coriolis effect makes winds spiral around the centre. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why cyclones cause flooding. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low pressure and strong onshore winds create storm surge; 2. intense rain exceeds river/urban drainage capacity; 3. large waves overtop coastal defences. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of cyclones on Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: strong winds damage buildings, crops, ports and power lines; storm surge floods and salinises coastal land; intense rain causes urban or river flooding and displacement. Valid alternative/qualification: cyclones are less frequent and affect a smaller area than major floods, droughts or heatwaves; forecasting and evacuation can reduce deaths. Relevant named evidence may include: Arabian Sea; Karachi; Sindh coast; Gwadar and Makran coast; Cyclone Yemyin 2007. Supported judgement: judge danger using frequency, area, deaths and economic loss rather than intensity alone. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Tropical cyclones are the most dangerous climatic hazard in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: strong winds damage buildings, crops, ports and power lines; storm surge floods and salinises coastal land; intense rain causes urban or river flooding and displacement. Valid alternative view, limitation or disadvantage: cyclones are less frequent and affect a smaller area than major floods, droughts or heatwaves; forecasting and evacuation can reduce deaths. Relevant named evidence may include: Arabian Sea; Karachi; Sindh coast; Gwadar and Makran coast; Cyclone Yemyin 2007. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge danger using frequency, area, deaths and economic loss rather than intensity alone. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS E. FLOODS IN PAKISTAN

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a flood? [1]	1 × 1 mark: water overflowing onto land that is normally dry. Other accurate equivalent wording should be credited.
Name one area affected by floods. [1]	1 × 1 mark: the Indus floodplain in Punjab or Sindh. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two natural causes of floods. [2]	Award 1 mark for each of any two valid points. Indicative content: intense/prolonged monsoon rainfall; rapid snow and glacier melt; cyclones and storm surge; steep relief and saturated ground.
State two human causes of floods. [2]	Award 1 mark for each of any two valid points. Indicative content: deforestation increases runoff; building on floodplains increases exposure; blocked urban drainage; poor dam/embankment management; impermeable urban surfaces.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the distribution of floods in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: river floods affect the Indus and tributary floodplains in Punjab and Sindh; flash floods affect steep northern and western valleys; urban floods affect major cities with poor drainage; coastal floods affect Sindh and Makran during cyclones.
Describe when floods occur. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: mainly during the July-September monsoon; during rapid spring/summer snow and glacier melt; after intense local storms/cloudbursts; coastal flooding occurs during cyclones.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why monsoon rainfall causes floods. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. intense/prolonged rain saturates soil so runoff rises; 2. rivers and reservoirs exceed capacity and overflow; 3. steep catchments send water rapidly downstream. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why human activity increases flood risk. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. deforestation reduces interception/infiltration and raises runoff; 2. building on floodplains increases exposure and removes natural storage; 3. impermeable surfaces/blocked drains cause rapid urban flooding. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the effectiveness of flood management methods. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: forecasting, warnings and evacuation reduce deaths; embankments and drainage protect selected settlements from moderate events; wetlands, floodplains and reservoirs store or slow water. Valid alternative/qualification: extreme floods can exceed defences; embankments are costly, may fail or transfer risk downstream; zoning and ecosystem restoration require land and enforcement. Relevant named evidence may include: 2022 Pakistan floods; Indus floodplain; Recharge Pakistan. Supported judgement: judge the best approach as a combination matched to local risk, maintenance capacity and available warning time. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Human factors are more important than natural factors in causing floods." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: deforestation reduces interception and infiltration, increasing runoff; impermeable urban surfaces and blocked drains produce rapid flash flooding; building on floodplains removes natural storage and places more people and property in the path of water. Valid alternative view, limitation or disadvantage: extreme monsoon rain, saturated soil, snow or glacier melt and cyclones can create flows beyond human control. Relevant named evidence may include: 2022 Pakistan floods; Indus floodplain; Karachi urban flooding. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge whether human activity mainly increases probability/exposure or whether the natural trigger dominates the named event. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS F. DROUGHTS IN PAKISTAN

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a drought? [1]	1 × 1 mark: an extended period of abnormally low water availability. Other accurate equivalent wording should be credited.
Name one type of drought. [1]	1 × 1 mark: meteorological, agricultural or hydrological drought. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two causes of drought. [2]	Award 1 mark for each of any two valid points. Indicative content: prolonged failure of monsoon/western rainfall; high temperature and evaporation; climate variability/change; over-abstraction and poor water management worsen shortage.
State two areas affected by drought. [2]	Award 1 mark for each of any two valid points. Indicative content: Balochistan; Tharparkar/Thar Desert; Cholistan; southern Sindh; dry parts of southern Punjab.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the distribution of droughts in Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: common in arid and semi-arid Balochistan; Thar and Cholistan deserts are vulnerable; southern Sindh and dry parts of Punjab may be affected; extent changes with rainfall failure.
Describe different types of drought. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: meteorological: prolonged rainfall deficit; agricultural: insufficient soil moisture for crops; hydrological: low river, reservoir and groundwater levels.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why low rainfall causes drought. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. prolonged rainfall failure reduces soil moisture, so crops and pasture cannot meet their water needs; 2. low rainfall reduces river flow, reservoirs and groundwater recharge, creating hydrological water shortage; 3. continued high evaporation during dry weather removes scarce water faster, extending the drought. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why human activity contributes to drought. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. over-abstraction for irrigation and cities lowers rivers and groundwater, so reserves run out during dry periods; 2. deforestation and overgrazing reduce infiltration and soil water storage, making land dry more quickly; 3. inefficient irrigation and leakage waste limited supplies, increasing shortage for downstream users. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of drought on people. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: crop and livestock losses reduce food supply and rural income; water scarcity increases disease, malnutrition and migration; long duration can affect large arid regions and reduce reservoir or groundwater supply. Valid alternative/qualification: floods and cyclones may cause greater immediate deaths and infrastructure damage; storage, efficient irrigation and drought-resistant crops can reduce drought impacts. Relevant named evidence may include: Thar, Balochistan; Cholistan; 1998–2002 drought. Supported judgement: judge seriousness using duration, area and livelihood dependence, while comparing the sudden intensity of other hazards. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Drought is the most serious climatic hazard in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: crop and livestock losses reduce food supply and rural income; water scarcity increases disease, malnutrition and migration; long duration can affect large arid regions and reduce reservoir or groundwater supply. Valid alternative view, limitation or disadvantage: floods and cyclones may cause greater immediate deaths and infrastructure damage; storage, efficient irrigation and drought-resistant crops can reduce drought impacts. Relevant named evidence may include: Thar, Balochistan; Cholistan; 1998–2002 drought. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge seriousness using duration, area and livelihood dependence, while comparing the sudden intensity of other hazards. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.2

CLIMATIC HAZARDS H- SEASONS OF PAKISTAN

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one season in Pakistan. [1]	1 × 1 mark: winter, hot season, monsoon season or post-monsoon season. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two characteristics of the monsoon season. [2]	Award 1 mark for each of any two valid points. Indicative content: occurs mainly from July to September; hot, humid conditions; heavy but variable rainfall; flood risk rises while reservoirs and crops receive water.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe seasonal changes in temperature. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: cool/cold winter from about December to February; temperatures rise through spring; hottest conditions occur before/during early monsoon summer; temperatures fall again in autumn; highlands remain cooler than lowlands.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why summer and winter rainfall differ. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. summer monsoon brings warm moist air from Arabian Sea/Bay of Bengal; 2. winter western depressions arrive from the Mediterranean region; 3. their different tracks, moisture and seasonal pressure systems change amount and distribution. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess how seasons affect human activities. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: temperature and rainfall affect housing, clothing, working hours, water supply and farming; highlands face cold, snow and isolation while arid regions face water shortage; favourable climate can support farming or tourism. Valid alternative/qualification: income, services, technology and infrastructure can reduce climatic constraints; urban areas can still suffer heat, flooding and pollution while rural effects vary with livelihood. Relevant named evidence may include: northern highlands; Indus Plain; Thar, Karachi coast. Supported judgement: judge climate important but not acting alone; compare adaptive capacity and livelihood dependence between regions. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Seasonal changes have a greater impact than climatic hazards." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: regular rainfall seasons set planting and harvesting calendars each year; hot and cool seasons alter water and energy demand and outdoor working hours; snow, monsoon and dry seasons shape transport and tourism. Valid alternative view, limitation or disadvantage: hazards such as the 2022 floods, droughts, heatwaves and cyclones cause exceptional deaths, displacement and infrastructure loss; hazard effects may be less frequent but much more severe. Relevant named evidence may include: Punjab kharif and rabi farming; 2022 Pakistan floods; Thar drought; 2015 Karachi heatwave. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge seasonal change more widespread and predictable, but major hazards greater in intensity and loss; the answer depends on the measure used. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3

CLIMATE IMPACT ON PEOPLE & ECONOMY A. IMPACTS ON LIFE IN DIFFERENT REGIONS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one characteristic of life in highland areas. [1]	1 × 1 mark: sparse settlement, difficult travel, short growing season, livestock grazing or seasonal tourism. Other accurate equivalent wording should be credited.
Name one climatic problem faced in lowland areas. [1]	1 × 1 mark: extreme summer heat, drought, water shortage, flooding or unreliable rainfall. Other accurate equivalent wording should be credited.
State one feature of life in arid regions. [1]	1 × 1 mark: sparse settlement, nomadic/semi-nomadic grazing, dependence on wells, limited farming or drought-resistant crops. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of climate on daily life in highland areas. [2]	Award 1 mark for each of any two valid points. Indicative content: cold/snow restricts the growing season; steep slopes limit farming and settlement; snow/landslides disrupt roads; livestock, forestry and tourism are important.
Give two ways people adapt to hot climates. [2]	Award 1 mark for each of any two valid points. Indicative content: high average and maximum temperatures; long hot summers; high evaporation; often mild winters and low rainfall in inland lowlands.
State two problems faced in arid regions. [2]	Award 1 mark for each of any two valid points. Indicative content: water shortage and unreliable rainfall; crop failure and poor grazing; heat and high evaporation; sparse services and migration.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how climate affects life in highland areas. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: cold/snow restricts the growing season; steep slopes limit farming and settlement; snow/landslides disrupt roads; livestock, forestry and tourism are important.
Describe how climate affects life in lowland areas. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: heat increases water and cooling demand; flat fertile land supports dense settlement and farming; monsoon/river floods threaten homes and crops; irrigation is important in dry areas.
Describe how climate affects life in coastal areas. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: sea moderates temperature but humidity is high; fishing and ports support livelihoods; cyclones, storm surge and sea-level rise threaten settlements; salinity can damage water and farmland.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why climate affects housing in different regions. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. heavy rain or snow requires sloping strong roofs so water or snow can be shed; 2. extreme heat encourages thick walls, shade and ventilation to reduce indoor temperatures; 3. flood risk encourages raised floors or settlement away from low-lying land. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why life is difficult in arid regions. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low unreliable rainfall creates drinking-water shortages and restricts crop farming; 2. sparse vegetation limits grazing and fuel supplies, so livelihoods support fewer people; 3. extreme heat raises evaporation and heat stress, increasing water demand and reducing outdoor productivity. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why climate affects transport in mountainous areas. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. snow and ice block roads and reduce traction, isolating settlements; 2. heavy rain triggers landslides that bury roads and damage bridges; 3. freeze-thaw and avalanches damage routes, raising maintenance cost and journey time. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate on people's daily lives in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: temperature and rainfall affect housing, clothing, working hours, water supply and farming; highlands face cold, snow and isolation while arid regions face water shortage; favourable climate can support farming or tourism. Valid alternative/qualification: income, services, technology and infrastructure can reduce climatic constraints; urban areas can still suffer heat, flooding and pollution while rural effects vary with livelihood. Relevant named evidence may include: northern highlands; Indus Plain; Thar, Karachi coast. Supported judgement: judge climate important but not acting alone; compare adaptive capacity and livelihood dependence between regions. Other accurate, relevant material must be credited.

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8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Climate has a greater impact on people in rural areas than urban areas." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: rural households depend directly on crops, livestock and local water, so drought, flood and temperature changes remove food and income; rural housing, roads and services may be less resilient and recovery support harder to reach. Valid alternative view, limitation or disadvantage: urban residents face heat islands, flash floods, disease, power failure and dense exposure; urban poor in informal settlements may be as vulnerable as rural communities. Relevant named evidence may include: Thar and rural Sindh; Indus floodplain farming; Karachi urban heat and flooding. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge rural impacts often more livelihood-dependent, but vulnerability is controlled by poverty and services rather than rural or urban location alone. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3 CLIMATE IMPACT ON PEOPLE & ECONOMY B-IMPACTS ON AGRICULTURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one crop grown in lowland areas. [1]	1 × 1 mark: wheat, rice, cotton or sugarcane. Other accurate equivalent wording should be credited.
State one effect of drought on crops. [1]	1 × 1 mark: wilting/crop failure, lower yields, shorter growing season or loss of cultivated area. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of floods on agriculture. [2]	Award 1 mark for each of any two valid points. Indicative content: crops and livestock are destroyed; soil may be eroded or buried by sediment; irrigation channels and farm roads are damaged; some silt and water may improve fertility after moderate flooding.
Give two effects of drought on farming. [2]	Award 1 mark for each of any two valid points. Indicative content: soil moisture falls and crops wilt/fail; yields and cultivated area decline; fodder and livestock water become scarce; farm income and food supply fall.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the effects of floods on agriculture. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: crops and livestock are destroyed; soil may be eroded or buried by sediment; irrigation channels and farm roads are damaged; some silt and water may improve fertility after moderate flooding.
Describe the effects of drought on agriculture. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: soil moisture falls and crops wilt/fail; yields and cultivated area decline; fodder and livestock water become scarce; farm income and food supply fall.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods damage agricultural land. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. fast water erodes fertile topsoil, reducing future soil productivity; 2. waterlogging deprives roots of oxygen and prolonged submergence kills crops; 3. sediment and debris bury fields while floods damage canals, machinery and livestock. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why drought reduces agricultural output. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. soil-moisture shortage prevents germination and photosynthesis, so crop yields fall; 2. low river and reservoir levels reduce irrigation supply, leaving a smaller area cultivated; 3. scarce fodder and drinking water weaken or kill livestock, reducing meat and milk output. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate on agricultural production in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: heat, drought or unreliable rain reduce soil moisture, crop yields and livestock health; floods waterlog or bury crops, erode soil and damage irrigation; suitable rainfall and temperature can extend growing seasons and raise output. Valid alternative/qualification: irrigation, seeds, fertiliser, pests, markets and farm size also affect production; floods are sudden whereas drought may cover a wider area for longer. Relevant named evidence may include: 2022 floods; Thar drought; cotton; wheat; rice. Supported judgement: judge the larger impact by area, duration, crop season and access to irrigation or recovery support. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Floods have a greater impact on agriculture than droughts." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: floods suddenly drown or bury standing crops and kill livestock; fast water erodes fertile topsoil and deposits damaging debris; floods damage canals, farm roads, machinery and storage, slowing recovery. Valid alternative view, limitation or disadvantage: drought can last longer, reduce both rain-fed and irrigated production and exhaust fodder and groundwater; the larger loss depends on crop stage, area, duration and access to irrigation. Relevant named evidence may include: 2022 floods in Sindh and Punjab; Thar drought; cotton, rice and wheat. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge floods often cause greater immediate physical loss, while prolonged drought can have the greater cumulative impact. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3 CLIMATE IMPACT ON PEOPLE & ECONOMY C-IMPACTS ON INDUSTRY

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one industry affected by climate. [1]	1 × 1 mark: agriculture-based industry, textiles, sugar, food processing or energy. Other accurate equivalent wording should be credited.
State one effect of floods on industry. [1]	1 × 1 mark: damage to factories/machinery/stock, interrupted power or transport, reduced production or lost income. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two impacts of floods on industry. [2]	Award 1 mark for each of any two valid points. Indicative content: factories, machinery and stock are damaged; power and water supplies are interrupted; roads/railways delay workers and raw materials; production, exports and income fall.
Give two impacts of drought on industry. [2]	Award 1 mark for each of any two valid points. Indicative content: water and food shortages; malnutrition and disease; loss of farm income and employment; migration/displacement; conflict over scarce resources.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how floods affect industry. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: factories, machinery and stock are damaged; power and water supplies are interrupted; roads/railways delay workers and raw materials; production, exports and income fall.
Describe how drought affects industrial production. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: less water is available for processing and cooling; HEP output may fall and power cuts increase; farm-based industries receive fewer raw materials; production costs rise and output falls.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods disrupt industrial production. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. water damages machinery, stock and factory buildings, forcing production to stop; 2. flooded roads and railways delay workers, raw materials and finished goods; 3. damage to power and water networks interrupts factory operations and raises costs. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why drought leads to energy shortages. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low reservoir and river levels reduce water through HEP turbines, so electricity output falls; 2. water scarcity can restrict cooling and processing at thermal power stations; 3. greater irrigation pumping during drought raises electricity demand while supply is reduced. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate on industrial development. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: floods damage factories, stocks, power and transport; drought reduces water and HEP for processing; extreme heat raises cooling costs and reduces labour productivity; climate affects agro-industrial raw materials. Valid alternative/qualification: energy supply, capital, skills, markets, security and transport location may be stronger controls; adaptation and insurance reduce climate losses. Relevant named evidence may include: cotton textiles; sugar and food processing; Karachi ports; 2022 floods. Supported judgement: judge climate as a risk multiplier whose importance differs by industry and location, not necessarily the main development factor. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Climate is the main factor affecting industrial development in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: floods damage factories, stocks, power and transport; drought reduces water and HEP for processing; extreme heat raises cooling costs and reduces labour productivity; climate affects agro-industrial raw materials. Valid alternative view, limitation or disadvantage: energy supply, capital, skills, markets, security and transport location may be stronger controls; adaptation and insurance reduce climate losses. Relevant named evidence may include: cotton textiles; sugar and food processing; Karachi ports; 2022 floods. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge climate as a risk multiplier whose importance differs by industry and location, not necessarily the main development factor. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3 CLIMATE IMPACT ON PEOPLE & ECONOMY D-IMPACTS ON INFRASTRUCTURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one type of infrastructure affected by climate. [1]	1 × 1 mark: road, railway, bridge, power line, dam, water system or communication network. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of floods on infrastructure. [2]	Award 1 mark for each of any two valid points. Indicative content: floods erode foundations and wash away surfaces; earthquakes, poor maintenance and rapid urbanisation also damage infrastructure; roads, railways, bridges, power lines, dams, water systems and communications are vulnerable; heat can soften roads and expand rails; drought lowers reservoir and groundwater levels; resilient design, drainage and maintenance reduce damage; early warning allows closures and protection; upgrading is expensive.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how floods affect infrastructure. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: roads and railways are washed away or blocked; bridges and foundations are undermined; power, water and communication networks fail; repairs are costly and services are disrupted.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods damage transport systems. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. fast water scours bridge foundations and washes away road or rail surfaces; 2. landslides and deposited mud block mountain and lowland routes; 3. flooded roads, stations and signals force closures, isolating communities and trade. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why drought affects water supply systems. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. low river flow and reservoir storage leave less water for treatment and distribution; 2. reduced recharge lowers groundwater tables, so wells yield less or dry up; 3. concentrated pollutants and higher demand make the remaining supply harder and more costly to provide safely. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate hazards on infrastructure. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: floods wash away roads, bridges and railways and damage power and water systems; landslides block mountain roads; heat damages road surfaces and rails while drought lowers reservoir and HEP output. Valid alternative/qualification: floods cause more direct physical damage, but drought has slower system-wide effects; poor design, maintenance, earthquakes and rapid urbanisation also create vulnerability. Relevant named evidence may include: 2022 Pakistan floods; Indus bridges; northern mountain roads; Tarbela and Mangla. Supported judgement: judge by repair cost, area, service interruption and duration, separating the hazard from pre-existing vulnerability. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Flooding causes more damage to infrastructure than drought." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: floods wash away roads, bridges and railways and damage power and water systems; landslides block mountain roads; heat damages road surfaces and rails while drought lowers reservoir and HEP output. Valid alternative view, limitation or disadvantage: floods cause more direct physical damage, but drought has slower system-wide effects; poor design, maintenance, earthquakes and rapid urbanisation also create vulnerability. Relevant named evidence may include: 2022 Pakistan floods; Indus bridges; northern mountain roads; Tarbela and Mangla. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge by repair cost, area, service interruption and duration, separating the hazard from pre-existing vulnerability. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3

CLIMATE IMPACT ON PEOPLE & ECONOMY E-IMPACTS OF FLOODS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is one effect of floods on people? [1]	1 × 1 mark: death/injury, displacement, homelessness, disease, loss of livelihood or food/water shortage. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two impacts of floods on settlements. [2]	Award 1 mark for each of any two valid points. Indicative content: death and injury; displacement and homelessness; contaminated water and disease; loss of food, income and services; damage to homes and property.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of floods on people. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: death and injury; displacement and homelessness; contaminated water and disease; loss of food, income and services; damage to homes and property.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods affect health. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. contaminated water spreads diarrhoeal disease; 2. standing water increases mosquito breeding and dengue/malaria; 3. injury, overcrowding and disrupted health services increase deaths. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why floods affect the economy. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crops, livestock, factories and stock are destroyed so output/income fall; 2. roads, power and communications are damaged so trade/production stop; 3. relief and rebuilding divert government and household funds. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of flooding in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: floods kill and displace people and spread water-borne disease; crops, livestock, homes, roads, bridges, power and industry are damaged; reconstruction diverts public funds and interrupts trade. Valid alternative/qualification: floodwater can recharge groundwater and deposit fertile alluvium; impacts differ with warning, building quality and floodplain management. Relevant named evidence may include: 2022 Pakistan floods; 2010 Pakistan floods; Indus floodplain; Sindh. Supported judgement: judge severity by scale, duration and recovery; distinguish widespread losses from limited long-term benefits. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Evaluate the impacts of flooding in Pakistan. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: floods kill and displace people and spread water-borne disease; crops, livestock, homes, roads, bridges, power and industry are damaged; reconstruction diverts public funds and interrupts trade. Valid alternative view, limitation or disadvantage: floodwater can recharge groundwater and deposit fertile alluvium; impacts differ with warning, building quality and floodplain management. Relevant named evidence may include: 2022 Pakistan floods; 2010 Pakistan floods; Indus floodplain; Sindh. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge severity by scale, duration and recovery; distinguish widespread losses from limited long-term benefits. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3

CLIMATE IMPACT ON PEOPLE & ECONOMY F-IMPACTS OF DROUGHTS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is one impact of drought on people? [1]	1 × 1 mark: water/food shortage, malnutrition, disease, loss of income/livelihood or migration. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of drought on agriculture. [2]	Award 1 mark for each of any two valid points. Indicative content: soil moisture falls and crops wilt/fail; yields and cultivated area decline; fodder and livestock water become scarce; farm income and food supply fall.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of drought on people. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: water and food shortages; malnutrition and disease; loss of farm income and employment; migration/displacement; conflict over scarce resources.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why drought affects food supply. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crop yields fall when soil moisture and irrigation water are insufficient, reducing market supply; 2. fodder and livestock water shortages reduce meat and milk production; 3. lower output raises prices and farm-income losses can reduce households' ability to buy food. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why drought causes migration. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crop and livestock losses remove rural income, so households move to find work; 2. wells and local supplies dry up, forcing people to move nearer reliable water; 3. food shortage and rising prices make remaining in the affected area difficult. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of drought in Pakistan. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: crop and livestock losses reduce food supply and rural income; water scarcity increases disease, malnutrition and migration; long duration can affect large arid regions and reduce reservoir or groundwater supply. Valid alternative/qualification: floods and cyclones may cause greater immediate deaths and infrastructure damage; storage, efficient irrigation and drought-resistant crops can reduce drought impacts. Relevant named evidence may include: Thar, Balochistan; Cholistan; 1998–2002 drought. Supported judgement: judge seriousness using duration, area and livelihood dependence, while comparing the sudden intensity of other hazards. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Drought has a greater impact on people than floods." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: drought creates prolonged drinking-water and food shortages; crop and livestock losses remove rural income and raise prices; long duration can cause malnutrition, disease and migration across wide arid areas. Valid alternative view, limitation or disadvantage: floods cause sudden deaths, injury, disease, homelessness and destruction of services and may affect millions at once. Relevant named evidence may include: Thar and Balochistan drought; 2022 Pakistan floods; 2010 Pakistan floods. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge drought by duration and livelihood loss versus floods by sudden scale and destruction; the conclusion should specify region and timescale. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: RESOURCE 1: CLIMATE IMPACTS TABLE (PAGE 5)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one positive effect of heavy rainfall. [1]	1 × 1 mark: fills reservoirs, recharges groundwater, supplies irrigation, supports crops/pasture or increases HEP generation. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the advantages of monsoon rainfall. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: waters crops and pasture; fills reservoirs and rivers; recharges groundwater, supports HEP and urban supply.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why flooding affects people and the economy. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crops, livestock, factories and stock are destroyed so output/income fall; 2. roads, power and communications are damaged so trade/production stop; 3. relief and rebuilding divert government and household funds. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impacts of heavy rainfall on Pakistan's economy. Use Fig. G1 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: adequate heavy seasonal rain can replenish reservoirs, groundwater, crops and HEP, it may reduce drought and irrigation demand. Valid alternative view, limitation or disadvantage: excess rain floods crops, factories, homes, roads and power systems; transport and trade stop and relief and rebuilding divert development funds. Relevant named evidence may include: 2022 Pakistan floods; Indus Plain agriculture; Tarbela and Mangla reservoirs. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge moderate well-timed rain economically valuable, but extreme or prolonged rainfall produces much larger losses. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: RESOURCE 2: CLIMATE IMPACTS TABLE (PAGE 6)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one impact of winter rainfall. [1]	1 × 1 mark: supports rabi crops, replenishes rivers/groundwater through snow, or may disrupt transport and cause landslides. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the effects of snowfall in northern Pakistan. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: stores water for later snowmelt; supports river flow and HEP, can support tourism; blocks roads, isolates settlements and damages buildings/ livestock.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why lack of monsoon rainfall affects farming. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. soil moisture and irrigation supply fall so crops wilt and yields decline; 2. reservoir/groundwater recharge falls, reducing later water supply; 3. fodder and livestock water become scarce. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the importance of seasonal rainfall for Pakistan. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: summer monsoon supports kharif crops and replenishes reservoirs, rivers and groundwater, winter western depressions support rabi crops and mountain snow storage. Valid alternative view, limitation or disadvantage: rainfall is uneven and unreliable, and heavy rain causes floods and erosion; irrigation and storage are needed to transfer water between places and seasons. Relevant named evidence may include: Punjab monsoon rainfall; western depressions in Balochistan and Khyber Pakhtunkhwa; Indus reservoirs. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge seasonal rainfall essential to food and water security, but its value depends on timing, distribution and management. Credit any other accurate, relevant and developed argument.

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RESOURCE-BASED QUESTION: RESOURCE 3: STORMS & COASTAL IMPACTS (PAGE 7)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one impact of storms on transport. [1]	1 × 1 mark: roads, railways or ports may be flooded, blocked or damaged, delaying travel and trade. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the effects of storms on economic activities. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: damage ports, boats and fishing activity; interrupt transport and trade; damage crops, businesses and power supply; reconstruction costs and income losses rise.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why storms affect trade and industry. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. ports, roads and railways close or are damaged, delaying goods; 2. power failure stops factories and cold storage; 3. fishing, crops, buildings and stock are damaged, reducing output and exports. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) "Storms have both positive and negative impacts." How far do you agree? Use Fig. G3 and your own knowledge. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: storm rain can refill rivers and reservoirs; infiltration may recharge groundwater and relieve drought; well-timed rain can support crops and pasture. Valid alternative view, limitation or disadvantage: strong winds, waves, surge and intense rain damage homes, ports, crops, power and transport and can cause deaths, salinity and displacement. Relevant named evidence may include: Arabian Sea storms; Karachi and Sindh coast; Gwadar and Makran coast; Cyclone Yemyin 2007. Use accurate evidence from the named figure/resource as well as own knowledge; do not credit invented values. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge limited water-supply benefits against usually larger losses where severe storms strike exposed coasts. Credit any other accurate, relevant and developed argument.

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UNIT 1.2.3 CLIMATE IMPACT ON PEOPLE & ECONOMY H-REGIONAL COMPARISON

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one region with a harsh climate. [1]	1 × 1 mark: the northern highlands, Balochistan Plateau or Thar Desert, with a valid climatic characteristic. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two differences between coastal and inland climates. [2]	Award 1 mark for each of any two valid points. Indicative content: coasts have milder summers and winters; inland areas have greater extremes; coasts have a smaller annual temperature range; coasts are more humid and receive sea breezes; inland rainfall and humidity are generally lower away from moisture sources.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe differences between highland and lowland regions. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: highlands are colder and steeper, lowlands are hotter and flatter; highlands have sparse settlements; lowlands are densely settled; highland farming is limited/terraced; lowlands support large irrigated farms; highlands face snow/landslides; lowlands face river floods and heat.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why economic activities vary between regions. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. flat fertile irrigated plains support intensive farming and agro-industry, whereas steep highlands restrict large farms; 2. coastal ports support fishing, trade and industry, while landlocked mountain regions face higher transport costs; 3. minerals, forests, water and climate differ by region, so different resources support different livelihoods. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess how climate influences regional development. [5]	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: temperature and rainfall affect housing, clothing, working hours, water supply and farming; highlands face cold, snow and isolation while arid regions face water shortage; favourable climate can support farming or tourism. Valid alternative/qualification: income, services, technology and infrastructure can reduce climatic constraints; urban areas can still suffer heat, flooding and pollution while rural effects vary with livelihood. Relevant named evidence may include: northern highlands; Indus Plain; Thar, Karachi coast. Supported judgement: judge climate important but not acting alone; compare adaptive capacity and livelihood dependence between regions. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Climate is the main factor affecting economic development in Pakistan." How far do you agree? Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: rainfall, temperature and hazards affect farming, water, HEP, tourism, labour and infrastructure; floods and droughts reduce output and force costly rebuilding. Valid alternative view, limitation or disadvantage: capital, skills, energy supply, markets, transport, security and government policy can be stronger development controls; technology and adaptation reduce climatic limits. Relevant named evidence may include: Indus irrigation and agriculture; 2022 Pakistan floods; cotton textiles; Karachi ports. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge climate a major constraint and risk multiplier, but development differences cannot be explained without economic and political factors. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.1

CAUSES OF CLIMATE CHANGE A-CLIMATE CHANGE & GREENHOUSE GASES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Define climate change.	1 × 1 mark: a long-term change in average climate patterns. Other accurate equivalent wording should be credited.
Name one greenhouse gas.	1 × 1 mark: carbon dioxide, methane or nitrous oxide. Other accurate equivalent wording should be credited.
State one source of CO_2.	1 × 1 mark: burning fossil fuels, industry, transport or deforestation. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two greenhouse gases.	Award 1 mark for each of any two valid points. Indicative content: carbon dioxide; methane; nitrous oxide; water vapour; fluorinated gases.
Give two human causes of climate change.	Award 1 mark for each of any two valid points. Indicative content: burning fossil fuels; deforestation; livestock/rice farming and fertiliser use; industry, transport and landfill emissions.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the greenhouse effect.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: short-wave solar radiation passes through the atmosphere; Earth absorbs energy and emits long-wave radiation; greenhouse gases absorb and re-radiate some outgoing heat; higher greenhouse-gas concentrations increase retained heat and temperature.
Describe how greenhouse gases cause warming.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: short-wave solar radiation passes through the atmosphere; Earth absorbs energy and emits long-wave radiation; greenhouse gases absorb and re-radiate some outgoing heat; higher greenhouse-gas concentrations increase retained heat and temperature.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why the enhanced greenhouse effect causes global warming.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. greenhouse gases absorb outgoing long-wave radiation, so less heat escapes to space; 2. they re-radiate some energy back towards the surface, raising lower-atmosphere temperature; 3. higher greenhouse-gas concentrations absorb more outgoing radiation, strengthening this warming effect. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of greenhouse gases in climate change.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: carbon dioxide, methane and nitrous oxide absorb outgoing long-wave radiation and strengthen the greenhouse effect; fossil fuels, deforestation, livestock, rice and fertilisers raise their concentrations; the speed of recent warming matches rapid human emissions. Valid alternative/qualification: volcanic, solar and orbital changes influence climate naturally; individual years and regions are also affected by natural variability. Relevant named evidence may include: carbon dioxide from coal, oil and gas; methane from livestock and rice; nitrous oxide from fertilisers. Supported judgement: judge human greenhouse-gas emissions the dominant recent driver while acknowledging natural variation and timescale. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Greenhouse gases are the main cause of climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: carbon dioxide, methane and nitrous oxide absorb outgoing long-wave radiation and strengthen the greenhouse effect; fossil fuels, deforestation, livestock, rice and fertilisers raise their concentrations; the speed of recent warming matches rapid human emissions. Valid alternative view, limitation or disadvantage: volcanic, solar and orbital changes influence climate naturally; individual years and regions are also affected by natural variability. Relevant named evidence may include: carbon dioxide from coal, oil and gas; methane from livestock and rice; nitrous oxide from fertilisers. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge human greenhouse-gas emissions the dominant recent driver while acknowledging natural variation and timescale. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.1

CAUSES OF CLIMATE CHANGE B-NATURAL CAUSES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one natural cause of climate change.	1 × 1 mark: volcanic activity, solar variation or orbital change. Other accurate equivalent wording should be credited.
What are sunspots?	1 × 1 mark: temporary darker, cooler areas on the Sun associated with changes in solar activity. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two natural causes of climate change.	Award 1 mark for each of any two valid points. Indicative content: volcanic eruptions; changes in solar activity; orbital/axial changes; natural ocean-atmosphere variation.
Give two effects of volcanic eruptions.	Award 1 mark for each of any two valid points. Indicative content: ash and sulphate aerosols reflect sunlight and cause short-term cooling; gases/particles alter atmospheric composition; large eruptions can disrupt rainfall and weather patterns.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how orbital changes affect climate.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: changes in orbit/tilt alter the amount and distribution of solar energy; seasons and long-term temperature patterns change; effects occur over very long timescales.
Describe how sunspots affect temperature.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: sunspot activity is linked to variation in solar output; more/less incoming solar energy can slightly alter temperature; it is a natural influence and does not explain the rapid recent warming alone.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why volcanic eruptions affect climate.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. ash and sulphate aerosols reflect sunlight, causing short-term cooling; 2. particles alter cloud/rainfall patterns; 3. some volcanic gases add greenhouse gases, though the cooling effect often dominates initially. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why natural causes cannot explain recent warming.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. orbital changes act over very long timescales, so they cannot explain the rapid temperature rise over recent decades; 2. large volcanic eruptions usually cause short-term cooling through reflective aerosols rather than sustained warming; 3. the timing and scale of recent warming match the rapid rise in human greenhouse-gas emissions. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of natural causes.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: volcanic aerosols can reflect sunlight and cause short-term cooling; changes in solar output can alter incoming energy; orbital and axial changes alter the long-term distribution of solar radiation. Valid alternative/qualification: recent rapid warming is better explained by human greenhouse-gas emissions from fossil fuels, deforestation and agriculture; volcanic cooling is mainly short term and orbital changes are very slow. Relevant named evidence may include: major volcanic eruptions; carbon dioxide from fossil fuels; methane from livestock and rice. Supported judgement: judge natural factors important over some timescales but human emissions dominant for recent sustained warming. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Natural causes are more important than human causes." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: volcanic aerosols can reflect sunlight and cause short-term cooling; changes in solar output can alter incoming energy; orbital and axial changes alter the long-term distribution of solar radiation. Valid alternative view, limitation or disadvantage: recent rapid warming is better explained by human greenhouse-gas emissions from fossil fuels, deforestation and agriculture; volcanic cooling is mainly short term and orbital changes are very slow. Relevant named evidence may include: major volcanic eruptions; carbon dioxide from fossil fuels; methane from livestock and rice. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge natural factors important over some timescales but human emissions dominant for recent sustained warming. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.1

CAUSES OF CLIMATE CHANGE C-HUMAN CAUSES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is the enhanced greenhouse effect?	1 × 1 mark: additional warming caused by increased greenhouse gases from human activity. Other accurate equivalent wording should be credited.
Name one fossil fuel.	1 × 1 mark: coal, oil or natural gas. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of fossil fuel use.	Award 1 mark for each of any two valid points. Indicative content: burning coal, oil and gas releases carbon dioxide; higher CO2 strengthens the greenhouse effect; air pollution and warming increase.
Give two causes of deforestation.	Award 1 mark for each of any two valid points. Indicative content: fuelwood collection; commercial logging; clearance for farming or settlement; overgrazing; roads and other infrastructure.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how fossil fuels cause climate change.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: burning coal, oil and gas releases carbon dioxide; higher CO2 strengthens the greenhouse effect; air pollution and warming increase.
Describe how agriculture contributes.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: livestock digestion and manure release methane; flooded rice fields release methane; fertilisers and soils release nitrous oxide; land clearance reduces carbon storage.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why fossil fuels increase global warming.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. burning coal, oil and gas releases carbon dioxide; 2. higher CO2 strengthens the greenhouse effect; 3. air pollution and warming increase. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why deforestation contributes.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. less carbon dioxide is removed by photosynthesis; 2. burning/decay releases stored carbon; 3. reduced evapotranspiration may lower local rainfall; 4. runoff, erosion and flood risk increase. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of human activities.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: carbon dioxide, methane and nitrous oxide absorb outgoing long-wave radiation and strengthen the greenhouse effect; fossil fuels, deforestation, livestock, rice and fertilisers raise their concentrations; the speed of recent warming matches rapid human emissions. Valid alternative/qualification: volcanic, solar and orbital changes influence climate naturally; individual years and regions are also affected by natural variability. Relevant named evidence may include: carbon dioxide from coal, oil and gas; methane from livestock and rice; nitrous oxide from fertilisers. Supported judgement: judge human greenhouse-gas emissions the dominant recent driver while acknowledging natural variation and timescale. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Human activities are the main cause of climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: carbon dioxide, methane and nitrous oxide absorb outgoing long-wave radiation and strengthen the greenhouse effect; fossil fuels, deforestation, livestock, rice and fertilisers raise their concentrations; the speed of recent warming matches rapid human emissions. Valid alternative view, limitation or disadvantage: volcanic, solar and orbital changes influence climate naturally; individual years and regions are also affected by natural variability. Relevant named evidence may include: carbon dioxide from coal, oil and gas; methane from livestock and rice; nitrous oxide from fertilisers. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge human greenhouse-gas emissions the dominant recent driver while acknowledging natural variation and timescale. Credit any other accurate, relevant and developed argument.

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UNIT
1.3.1

CAUSES OF CLIMATE CHANGE D-URBANISATION

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is an urban heat island?	1 × 1 mark: an urban area that is warmer than its surrounding rural area. Other accurate equivalent wording should be credited.
Name one city affected.	1 × 1 mark: Karachi, Lahore or another large Pakistani city. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two causes of urban heat islands.	Award 1 mark for each of any two valid points. Indicative content: concrete and asphalt absorb and re-radiate heat; few trees reduce shade and evapotranspiration; vehicles, industry and air conditioning release waste heat; dense buildings trap heat and reduce ventilation.
Give two effects of urbanisation.	Award 1 mark for each of any two valid points. Indicative content: greater fossil-fuel use and traffic emissions; impermeable surfaces increase runoff and flood risk; less vegetation reduces cooling and carbon storage; urban heat-island temperatures rise.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the urban heat island effect.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: concrete and asphalt absorb and re-radiate heat; few trees reduce shade and evapotranspiration; vehicles, industry and air conditioning release waste heat; dense buildings trap heat and reduce ventilation.
Describe how cities increase temperature.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: concrete and asphalt absorb and re-radiate heat; few trees reduce shade and evapotranspiration; vehicles, industry and air conditioning release waste heat; dense buildings trap heat and reduce ventilation.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why cities are warmer than rural areas.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. concrete/asphalt absorb and re-radiate heat; 2. less vegetation reduces shade and evapotranspiration; 3. traffic, industry and air conditioning release waste heat; 4. dense buildings reduce ventilation and trap heat. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of urbanisation on climate change.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: cities concentrate road transport and its fuel emissions; urban electricity, industry and construction often add fossil-fuel carbon dioxide; concrete, asphalt and limited vegetation intensify local urban heat islands. Valid alternative/qualification: urbanisation is not the same as global climate change and its effect depends on the energy source; power generation, industry, agriculture and deforestation also emit large amounts. Relevant named evidence may include: Karachi; Lahore; fossil-fuel power and road transport. Supported judgement: judge urbanisation a significant indirect contributor, but compare its emissions with national energy, land-use and agricultural sources. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Urbanisation is a major contributor to climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: cities concentrate road transport and its fuel emissions; urban electricity, industry and construction often add fossil-fuel carbon dioxide; concrete, asphalt and limited vegetation intensify local urban heat islands. Valid alternative view, limitation or disadvantage: urbanisation is not the same as global climate change and its effect depends on the energy source; power generation, industry, agriculture and deforestation also emit large amounts. Relevant named evidence may include: Karachi; Lahore; fossil-fuel power and road transport. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge urbanisation a significant indirect contributor, but compare its emissions with national energy, land-use and agricultural sources. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.1

CAUSES OF CLIMATE CHANGE E. DEFORESTATION AND AGRICULTURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is deforestation?	1 × 1 mark: the large-scale removal of forest cover. Other accurate equivalent wording should be credited.
Name one source of methane.	1 × 1 mark: livestock, rice fields, landfill or gas leakage. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects of deforestation.	Award 1 mark for each of any two valid points. Indicative content: less carbon dioxide is removed by photosynthesis; burning/decay releases stored carbon; reduced evapotranspiration may lower local rainfall; runoff, erosion and flood risk increase.
Give two sources of methane.	Award 1 mark for each of any two valid points. Indicative content: livestock digestion and manure release methane; flooded rice fields release methane; fertilisers and soils release nitrous oxide; land clearance reduces carbon storage.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how deforestation affects climate.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: less carbon dioxide is removed by photosynthesis; burning/decay releases stored carbon; reduced evapotranspiration may lower local rainfall; runoff, erosion and flood risk increase.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why livestock farming contributes to climate change.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. ruminant digestion releases methane; 2. manure releases methane and nitrous oxide; 3. land clearance for grazing/feed reduces carbon storage. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of deforestation.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: tree loss reduces carbon-dioxide uptake by photosynthesis; burning or decay releases carbon stored in vegetation and soils; agricultural expansion after clearance can add methane and nitrous oxide. Valid alternative/qualification: fossil-fuel combustion in power, transport and industry is a broader direct source of carbon dioxide; Pakistan's deforestation is important locally but global warming depends on worldwide emissions. Relevant named evidence may include: northern forests; Indus Delta mangroves; fossil-fuel power generation. Supported judgement: judge deforestation important for carbon and ecosystems, but usually not the sole or largest cause of recent warming. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Deforestation is the most important cause of climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: tree loss reduces carbon-dioxide uptake by photosynthesis; burning or decay releases carbon stored in vegetation and soils; agricultural expansion after clearance can add methane and nitrous oxide. Valid alternative view, limitation or disadvantage: fossil-fuel combustion in power, transport and industry is a broader direct source of carbon dioxide; Pakistan's deforestation is important locally but global warming depends on worldwide emissions. Relevant named evidence may include: northern forests; Indus Delta mangroves; fossil-fuel power generation. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge deforestation important for carbon and ecosystems, but usually not the sole or largest cause of recent warming. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.1

CAUSES OF CLIMATE CHANGE F-PAKISTAN

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State one reason Pakistan is vulnerable to climate change.	1 × 1 mark: high exposure to floods/droughts, glacier dependence, long coastline, agricultural dependence, poverty or limited adaptive capacity. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two reasons Pakistan is vulnerable.	Award 1 mark for each of any two valid points. Indicative content: strong dependence on climate-sensitive agriculture; large population exposed to Indus floods and drought; glacier/snowmelt dependence; long vulnerable coastline; poverty and limited adaptation capacity.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe why Pakistan is vulnerable to climate change.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: strong dependence on climate-sensitive agriculture; large population exposed to Indus floods and drought; glacier/snowmelt dependence; long vulnerable coastline; poverty and limited adaptation capacity.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why climate change is a major issue for Pakistan.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. agriculture and food supply are highly climate-sensitive; 2. Indus water depends on glaciers, snow and variable monsoon rain; 3. large populations/infrastructure face floods, droughts, heat and coastal risk; 4. limited resources reduce adaptive capacity. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of climate change on Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: dependence on Indus water, climate-sensitive farming and glaciers creates exposure; large populations and infrastructure face floods, droughts, heat and coastal hazards; poverty and limited adaptive capacity increase damage. Valid alternative/qualification: vulnerability varies by region and can be reduced through warnings, resilient infrastructure and water management. Relevant named evidence may include: 2022 floods; Thar drought; Indus Delta; Hindu Kush–Karakoram–Himalaya glaciers. Supported judgement: judge vulnerability high because exposure and dependence combine, while recognising different local capacities to adapt. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Pakistan is highly vulnerable to climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: dependence on Indus water, climate-sensitive farming and glaciers creates exposure; large populations and infrastructure face floods, droughts, heat and coastal hazards; poverty and limited adaptive capacity increase damage. Valid alternative view, limitation or disadvantage: vulnerability varies by region and can be reduced through warnings, resilient infrastructure and water management. Relevant named evidence may include: 2022 floods; Thar drought; Indus Delta; Hindu Kush–Karakoram–Himalaya glaciers. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge vulnerability high because exposure and dependence combine, while recognising different local capacities to adapt. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: A-GLACIAL MELTING

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a glacier?	1 × 1 mark: a persistent mass of ice that moves slowly under gravity. Other accurate equivalent wording should be credited.
What is a GLOF?	1 × 1 mark: a sudden flood caused by the failure of a natural dam holding a glacial lake. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two impacts of glacier melting.	Award 1 mark for each of any two valid points. Indicative content: short-term river and GLOF flood risk rises; erosion and damage to settlements/infrastructure increase; long-term dry-season water storage and flow decline; irrigation and HEP become less reliable.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of glacier melting in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: short-term river and GLOF flood risk rises; erosion and damage to settlements/infrastructure increase; long-term dry-season water storage and flow decline; irrigation and HEP become less reliable.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why glacier melting affects river flow.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. rapid melt initially increases river discharge and GLOF risk; 2. continued ice loss reduces the volume stored in glaciers, so dry-season flow becomes lower and less reliable; 3. changed seasonal melt shifts the timing of peak flow, making irrigation and HEP supply harder to manage. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of glacier melting in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: rapid melt increases GLOF and downstream flood risk; long-term ice loss reduces stored water and dry-season Indus flow; settlements, roads, irrigation and HEP become less reliable. Valid alternative/qualification: extra meltwater can temporarily increase flow; drought, pollution, inefficient irrigation and population growth also threaten water security; some Karakoram glacier behaviour differs locally. Relevant named evidence may include: Hindu Kush–Karakoram–Himalaya; Indus headwaters; Shishper Glacier and Hassanabad. Supported judgement: judge seriousness by distinguishing short-term flood risk from long-term water-storage loss and comparing other national threats. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Glacier melting is the most serious environmental impact of climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: rapid melt increases GLOF and downstream flood risk; long-term ice loss threatens dry-season Indus flow, irrigation, ecosystems and HEP. Valid alternative view, limitation or disadvantage: sea-level rise, heat, drought, biodiversity loss and extreme floods may affect other regions and more people; glacier response varies locally and adaptation can reduce GLOF losses. Relevant named evidence may include: Hindu Kush–Karakoram–Himalaya; Indus headwaters; Shishper Glacier and Hassanabad; Indus Delta. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge glacier loss especially serious because of Pakistan's Indus dependence, but compare national reach, duration and reversibility with other impacts. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: B-SEA LEVEL RISE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is meant by sea level rise?	1 × 1 mark: a long-term increase in average sea level. Other accurate equivalent wording should be credited.
Name one coastal area affected	1 × 1 mark: Indus Delta, Karachi, Thatta or Badin. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two impacts of sea level rise.	Award 1 mark for each of any two valid points. Indicative content: coastal flooding and erosion; saltwater intrusion into farmland and groundwater, loss of mangroves/wetlands and biodiversity; damage/displacement in the Indus Delta and coastal settlements.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of sea level rise.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: coastal flooding and erosion; saltwater intrusion into farmland and groundwater, loss of mangroves/wetlands and biodiversity; damage/displacement in the Indus Delta and coastal settlements.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why sea level rise affects coastal areas.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. higher sea level allows storm surges and tides to flood land more frequently; 2. saltwater moves into soils and aquifers, damaging crops and drinking-water supplies; 3. stronger erosion and permanent inundation remove beaches, mangroves, homes and infrastructure. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of sea level rise.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: higher sea level increases coastal flooding, erosion and storm-surge reach; saltwater intrusion damages farmland and groundwater, mangroves, fisheries, settlements and infrastructure may be lost or displaced. Valid alternative/qualification: subsidence, reduced sediment and cyclones also affect the coast; mangrove restoration, planning and defences can reduce impacts; inland floods, drought and glacier change may affect more of Pakistan. Relevant named evidence may include: Indus Delta; Thatta; Badin; Karachi; Indus Delta mangroves. Supported judgement: judge the long-term threat severe in low-lying coastal districts but compare national scale and adaptation capacity. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Sea level rise is the greatest threat to Pakistan's environment." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: higher sea level increases coastal flooding, erosion and storm-surge reach; saltwater intrusion damages farmland and groundwater, mangroves, fisheries, settlements and infrastructure may be lost or displaced. Valid alternative view, limitation or disadvantage: subsidence, reduced sediment and cyclones also affect the coast; mangrove restoration, planning and defences can reduce impacts; inland floods, drought and glacier change may affect more of Pakistan. Relevant named evidence may include: Indus Delta; Thatta; Badin; Karachi; Indus Delta mangroves. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the long-term threat severe in low-lying coastal districts but compare national scale and adaptation capacity. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: C. EXTREME WEATHER

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one extreme weather event.	1 × 1 mark: flood, drought, heatwave, cyclone or severe storm. Other accurate equivalent wording should be credited.
What is a heatwave?	1 × 1 mark: a prolonged period of unusually high temperature for that place and season. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Give two impacts of floods.	Award 1 mark for each of any two valid points. Indicative content: death and injury; displacement and homelessness; contaminated water and disease; loss of food, income and services; damage to homes and property.
State two impacts of heatwaves.	Award 1 mark for each of any two valid points. Indicative content: more deaths, heat stress and disease; damage to crops, homes and infrastructure; displacement and livelihood loss; higher emergency and reconstruction costs.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of extreme weather events.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: more deaths, heat stress and disease; damage to crops, homes and infrastructure; displacement and livelihood loss; higher emergency and reconstruction costs.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods damage settlements.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. fast water collapses walls and undermines foundations; 2. mud/sediment contaminates homes and services; 3. power, water and roads fail, displacing residents. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why heatwaves affect people.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. the body cannot lose heat effectively, causing dehydration, heatstroke and possible death; 2. high night temperatures prevent recovery and worsen heart or breathing illness; 3. outdoor workers reduce hours or productivity and households face higher cooling costs. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impacts of extreme weather events.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: floods and storms kill or displace people and damage crops, homes, transport and power; heatwaves cause illness and reduce productivity; drought causes water, food and livelihood insecurity. Valid alternative/qualification: some rainfall events replenish reservoirs or groundwater; impacts vary with warning, infrastructure, poverty and preparedness. Relevant named evidence may include: 2022 Pakistan floods; 2015 Karachi heatwave; Thar drought; Arabian Sea cyclones. Supported judgement: judge the greatest impact by severity, area, duration and recovery rather than treating all extreme events as equal. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Extreme weather events are increasing due to climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: warmer air can hold more moisture, increasing the potential for intense rainfall; higher temperatures make heatwaves more likely and greater evaporation can intensify drought; warmer seas can increase cyclone rainfall or intensity. Valid alternative view, limitation or disadvantage: individual events also depend on natural variability and local land use, and not every hazard trend is identical; better records may increase the number of reported events. Relevant named evidence may include: 2022 Pakistan floods; 2015 Karachi heatwave; Arabian Sea cyclones; Thar drought. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge climate change increases the probability or intensity of several extremes, but do not attribute every single event to it alone. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: D-HEALTH

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one disease linked to climate change.	1 × 1 mark: dengue, malaria, diarrhoeal disease or heatstroke. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two health impacts of climate change.	Award 1 mark for each of any two valid points. Indicative content: heatstroke, dehydration and cardiovascular stress; flood-contaminated water causes diarrhoeal disease; warmer/wetter conditions can spread dengue and malaria; crop loss may increase malnutrition.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts of climate change on health.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: heatstroke, dehydration and cardiovascular stress; flood-contaminated water causes diarrhoeal disease; warmer/wetter conditions can spread dengue and malaria; crop loss may increase malnutrition.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why climate change increases disease risk.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. warmer conditions extend mosquito breeding and transmission seasons, increasing dengue and malaria risk; 2. floods mix sewage with drinking water, spreading diarrhoeal disease; 3. heatwaves directly increase heatstroke and worsen heart and respiratory illness. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate change on health.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: heatwaves cause heatstroke, dehydration and cardiovascular stress; floodwater contamination spreads diarrhoeal disease; warmer or wetter conditions can increase dengue and malaria risk; crop loss can worsen malnutrition. Valid alternative/qualification: sanitation, poverty, housing and healthcare access strongly influence outcomes; economic losses affect more sectors and can reduce future health spending. Relevant named evidence may include: 2015 Karachi heatwave; 2022 floods; dengue in urban areas. Supported judgement: judge relative impact using deaths, people affected, duration and indirect economic-health links. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Climate change has a greater impact on health than on the economy." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: heat, disease, unsafe water and malnutrition directly cause illness and death; health losses reduce learning and labour productivity. Valid alternative view, limitation or disadvantage: crop, industry and infrastructure losses reduce income, trade and government revenue and can affect more people indirectly; economic damage also weakens future health services. Relevant named evidence may include: 2015 Karachi heatwave; 2022 Pakistan floods; dengue; cotton and transport losses. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge using deaths and well-being versus value, employment and duration, while recognising that health and economic effects reinforce each other. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2

CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: E-INFRASTRUCTURE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one type of infrastructure affected by climate change.	1 × 1 mark: road, railway, bridge, power line, dam, water system or communication network. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two effects on infrastructure.	Award 1 mark for each of any two valid points. Indicative content: roads and railways are washed away or blocked; bridges and foundations are undermined; power, water and communication networks fail; repairs are costly and services are disrupted.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how climate change affects infrastructure.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: floods wash away roads, bridges and railways; heat damages road surfaces/rails and raises cooling demand; storms damage power and communication networks; sea-level rise threatens coastal infrastructure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floods damage infrastructure.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. fast water erodes road surfaces and bridge foundations, causing collapse or closure; 2. flooded substations, water plants and communication networks interrupt essential services; 3. saturated slopes trigger landslides that block or destroy mountain roads. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact on infrastructure.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: floods wash away roads, bridges and railways and damage power and water systems; landslides block mountain roads; heat damages road surfaces and rails while drought lowers reservoir and HEP output. Valid alternative/qualification: floods cause more direct physical damage, but drought has slower system-wide effects; poor design, maintenance, earthquakes and rapid urbanisation also create vulnerability. Relevant named evidence may include: 2022 Pakistan floods; Indus bridges; northern mountain roads; Tarbela and Mangla. Supported judgement: judge by repair cost, area, service interruption and duration, separating the hazard from pre-existing vulnerability. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Flooding causes the greatest damage to infrastructure." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: fast water washes away roads and railways, scours bridge foundations and floods power, water and communication systems; landslides and debris extend closures and repair costs. Valid alternative view, limitation or disadvantage: heat damages roads and rails, drought reduces reservoirs and HEP, cyclones damage coastal networks, and poor maintenance or earthquakes can be more important locally. Relevant named evidence may include: 2022 Pakistan floods; Indus bridges; northern mountain roads; Tarbela and Mangla. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge flooding usually causes the widest sudden physical destruction, while the greatest long-term disruption can depend on region and infrastructure type. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2

CONSEQUENCES OF CLIMATE CHANGE ENVIRONMENTAL IMPACTS ON: F-ECONOMY

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State one sector affected by climate change.	1 × 1 mark: agriculture, industry, energy, transport, tourism or health. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two impacts on agriculture.	Award 1 mark for each of any two valid points. Indicative content: crop and livestock losses reduce agricultural output; farm-based industries receive fewer raw materials; flood/heat damage and power disruption lower industrial production; food prices, unemployment and import costs may rise.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the impacts on agriculture and industry.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: crop and livestock losses reduce agricultural output; farm-based industries receive fewer raw materials; flood/heat damage and power disruption lower industrial production; food prices, unemployment and import costs may rise.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why climate change affects agriculture.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. heat/drought reduce soil moisture and crop yields; 2. floods destroy crops, livestock and irrigation; 3. changing seasons/pests disrupt planting and growing periods. Credit any other accurate chain that explains how or why the stated outcome occurs.

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5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the impact of climate change on Pakistan's economy.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: crop and livestock loss reduces farm income, food supply, exports and agro-industrial raw materials; flood damage and rebuilding divert funds from development; heat, water and power shortages reduce labour and industrial productivity; transport disruption delays trade. Valid alternative/qualification: effects differ by region and sector and can be reduced by adaptation; investment, energy policy, skills and global markets also shape development. Relevant named evidence may include: 2022 Pakistan floods; cotton and textiles; Indus irrigation; hydroelectric power. Supported judgement: judge the largest impact by value, employment, duration and connections between agriculture, industry and infrastructure. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Climate change has a greater impact on agriculture than industry." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: crops and livestock are directly exposed to heat, drought, flood and changing seasons, threatening food and rural income; agro-industries lose raw materials when farms fail. Valid alternative view, limitation or disadvantage: industry also loses power, water, workers, factories, transport and markets; some industries can relocate or insure assets more easily than farmers. Relevant named evidence may include: 2022 flood crop losses; Indus irrigation; cotton and textiles; sugar and food processing. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge agriculture generally more directly climate-sensitive, while industrial impacts can be large through linked supply chains and infrastructure. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE SOURCE-BASED QUESTION: GLACIER DATA

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one impact of glacier melting. [1]	1 × 1 mark: greater GLOF/flood risk, damage to settlements, or reduced long-term dry-season river water. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the effects shown. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why glacier melt affects water supply. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. rapid melt can initially raise flow and flood risk; 2. long-term ice loss reduces stored water and dry-season river flow; 3. less reliable flow harms irrigation, drinking supply and HEP. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impact on Pakistan's future water security. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: rapid melt increases GLOF and downstream flood risk; long-term ice loss reduces stored water and dry-season Indus flow; settlements, roads, irrigation and HEP become less reliable. Valid alternative view, limitation or disadvantage: extra meltwater can temporarily increase flow; drought, pollution, inefficient irrigation and population growth also threaten water security; some Karakoram glacier behaviour differs locally. Relevant named evidence may include: Hindu Kush–Karakoram–Himalaya; Indus headwaters; Shishper Glacier and Hassanabad. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge seriousness by distinguishing short-term flood risk from long-term water-storage loss and comparing other national threats. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE SOURCE-BASED QUESTION: SEA LEVEL DATA

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one affected area. [1]	1 × 1 mark: Indus Delta, Karachi, Thatta or Badin. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the impacts of sea level rise. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: coastal flooding and erosion; saltwater intrusion into farmland and groundwater; loss of mangroves/wetlands and biodiversity; damage/displacement in the Indus Delta and coastal settlements.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why saltwater intrusion affects farming. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. salt makes soil water harder for roots to absorb so yields fall; 2. toxic salt accumulation reduces fertility and may make land unusable; 3. saline groundwater cannot safely irrigate many crops. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the long-term impact on coastal regions. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: higher sea level increases coastal flooding, erosion and storm-surge reach; saltwater intrusion damages farmland and groundwater, mangroves, fisheries, settlements and infrastructure may be lost or displaced. Valid alternative view, limitation or disadvantage: subsidence, reduced sediment and cyclones also affect the coast; mangrove restoration, planning and defences can reduce impacts; inland floods, drought and glacier change may affect more of Pakistan. Relevant named evidence may include: Indus Delta; Thatta; Badin; Karachi; Indus Delta mangroves. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the long-term threat severe in low-lying coastal districts but compare national scale and adaptation capacity. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE SOURCE-BASED QUESTION: FLOOD DATA

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one effect of floods. [1]	1 × 1 mark: death/injury, displacement, crop/property/infrastructure damage, disease or loss of income. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe the impacts shown. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Reserve 1 mark for an accurate figure, value, mapped reference or other evidence read from the named resource. Indicative content: credit three separate, accurate stages/methods/impacts taken directly from the named resource; reserve one mark for precise evidence or correct sequence from the resource; do not credit information that contradicts the figure.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why floods affect the economy. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crops, livestock, factories and stock are destroyed so output/income fall; 2. roads, power and communications are damaged so trade/production stop; 3. relief and rebuilding divert government and household funds. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impacts of floods on Pakistan. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: floods kill and displace people and spread water-borne disease; crops, livestock, homes, roads, bridges, power and industry are damaged; reconstruction diverts public funds and interrupts trade. Valid alternative view, limitation or disadvantage: floodwater can recharge groundwater and deposit fertile alluvium; impacts differ with warning, building quality and floodplain management. Relevant named evidence may include: 2022 Pakistan floods; 2010 Pakistan floods; Indus floodplain; Sindh. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge severity by scale, duration and recovery; distinguish widespread losses from limited long-term benefits. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.2 CONSEQUENCES OF CLIMATE CHANGE SOURCE-BASED QUESTION: ECONOMIC DATA

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(a) Identify one sector affected. [1]	1 × 1 mark: agriculture, industry, energy, transport, tourism or health. Other accurate equivalent wording should be credited.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(b) Describe impacts on industry. [3]	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: factories, machinery and stock are damaged; power and water supplies are interrupted; roads/railways delay workers and raw materials; production, exports and income fall.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(c) Explain two reasons why climate change reduces GDP. [4]	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. crop and livestock losses reduce agricultural output, exports and agro-industrial raw materials; 2. damage to factories and infrastructure stops production and requires costly reconstruction; 3. heat and power or water shortages reduce labour productivity and industrial output. Credit any other accurate chain that explains how or why the stated outcome occurs.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
(d) Evaluate the impact of climate change on economic development. Give reasons and examples to support your judgement. [8]	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: crop and livestock loss reduces farm income, food supply, exports and agro-industrial raw materials; flood damage and rebuilding divert funds from development; heat, water and power shortages reduce labour and industrial productivity; transport disruption delays trade. Valid alternative view, limitation or disadvantage: effects differ by region and sector and can be reduced by adaptation; investment, energy policy, skills and global markets also shape development. Relevant named evidence may include: 2022 Pakistan floods; cotton and textiles; Indus irrigation; hydroelectric power. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the largest impact by value, employment, duration and connections between agriculture, industry and infrastructure. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3

PAKISTAN'S RESPONSE TO CLIMATE CHANGE A-AGREEMENTS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is meant by the Paris Agreement?	1 × 1 mark: the international climate agreement under which countries act to limit warming and strengthen adaptation. Other accurate equivalent wording should be credited.
What are Nationally Determined Contributions (NDCs)?	1 × 1 mark: a country's stated national climate targets and actions under the Paris Agreement. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two international climate agreements Pakistan has joined.	Award 1 mark for each of any two valid points. Indicative content: UN Framework Convention on Climate Change (UNFCCC); Paris Agreement; Kyoto Protocol where credited in the taught context.
State two aims of Pakistan's National Climate Change Policy.	Award 1 mark for each of any two valid points. Indicative content: reduce vulnerability and build climate resilience; mainstream adaptation into national planning; protect water, agriculture, health and ecosystems; coordinate institutions and mobilise climate finance.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe Pakistan's role in international climate agreements.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: UN Framework Convention on Climate Change (UNFCCC); Paris Agreement; Kyoto Protocol where credited in the taught context.
Describe the main features of the National Adaptation Plan (NAP).	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: reduce vulnerability and build climate resilience; mainstream adaptation into national planning; protect water, agriculture, health and ecosystems; coordinate institutions and mobilise climate finance.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why the Paris Agreement helps reduce global emissions.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. countries submit and update emission-reduction plans, creating national targets for lower greenhouse-gas output; 2. reporting and review make progress more visible and encourage stronger action; 3. international finance and technology can help countries replace high-carbon energy and improve efficiency. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why national climate policies help Pakistan respond to climate change.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. policies set common targets and responsibilities, coordinating action across government sectors; 2. adaptation planning directs funds to vulnerable water, farming, health and infrastructure systems; 3. emission policies support renewables, efficiency and forests, helping Pakistan meet its NDC. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of international agreements for Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: global cooperation is necessary because greenhouse gases cross borders; the Paris Agreement and NDCs create targets, reporting and policy direction; agreements can support climate finance, technology and expertise for Pakistan. Valid alternative/qualification: commitments may be weakly enforced and promised finance may be insufficient; national implementation and local adaptation determine actual results; Pakistan alone cannot control global emissions. Relevant named evidence may include: Paris Agreement; UNFCCC; Pakistan's Nationally Determined Contribution; National Adaptation Plan. Supported judgement: judge agreements essential for coordination and support, but effective only when translated into funded national and local action. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"International agreements are the most effective way to tackle climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: global cooperation is necessary because greenhouse gases cross borders; the Paris Agreement and NDCs create targets, reporting and policy direction; agreements can support climate finance, technology and expertise for Pakistan. Valid alternative view, limitation or disadvantage: commitments may be weakly enforced and promised finance may be insufficient; national implementation and local adaptation determine actual results; Pakistan alone cannot control global emissions. Relevant named evidence may include: Paris Agreement; UNFCCC; Pakistan's Nationally Determined Contribution; National Adaptation Plan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge agreements essential for coordination and support, but effective only when translated into funded national and local action. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3

PAKISTAN'S RESPONSE TO CLIMATE CHANGE B-NATIONAL POLICIES (III). REDUCING GHG EMISSIONS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What are greenhouse gases?	1 × 1 mark: atmospheric gases that absorb and re-radiate outgoing long-wave radiation. Other accurate equivalent wording should be credited.
Name one greenhouse gas.	1 × 1 mark: carbon dioxide, methane or nitrous oxide. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two ways to reduce greenhouse gas emissions.	Award 1 mark for each of any two valid points. Indicative content: renewable energy and energy efficiency; public transport/electric vehicles and vehicle standards; afforestation; industrial emission controls; better waste management and methane capture.
Give two sources of greenhouse gases.	Award 1 mark for each of any two valid points. Indicative content: carbon dioxide; methane; nitrous oxide; water vapour; fluorinated gases.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how transport contributes to greenhouse gas emissions.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: power stations and industry burning fossil fuels; road transport fuel combustion; livestock and rice farming; deforestation; landfill and waste.
Describe how emissions can be reduced in cities.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: renewable energy and energy efficiency; public transport/electric vehicles and vehicle standards; afforestation; industrial emission controls; better waste management and methane capture.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why electric vehicles reduce emissions.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. electric motors have no exhaust emissions at the point of use; 2. if charged with renewable electricity they replace petrol/diesel CO2; 3. greater efficiency means less energy per journey; benefit is smaller if electricity is fossil-fuelled. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why reducing fossil fuels lowers global warming.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. less coal/oil/gas combustion releases less carbon dioxide; 2. lower greenhouse-gas concentration weakens additional heat trapping; 3. efficiency and renewables also reduce methane leakage and air pollution. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the effectiveness of strategies to reduce emissions.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: renewables, efficiency, public transport, electric vehicles and industrial controls reduce fossil-fuel emissions; afforestation and methane control address land and waste sources; mitigation limits the future scale of warming. Valid alternative/qualification: high capital cost, grid limits and behaviour can slow implementation; adaptation remains essential because current impacts and some future warming cannot be avoided. Relevant named evidence may include: Jhimpir wind corridor, mass transit; Ten Billion Tree Tsunami Programme. Supported judgement: judge effectiveness by actual emissions avoided and implementation scale; balance long-term mitigation with urgent adaptation. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Reducing greenhouse gas emissions is more important than adaptation strategies." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: renewables, efficiency, public transport, electric vehicles and industrial controls reduce fossil-fuel emissions; afforestation and methane control address land and waste sources; mitigation limits the future scale of warming. Valid alternative view, limitation or disadvantage: high capital cost, grid limits and behaviour can slow implementation; adaptation remains essential because current impacts and some future warming cannot be avoided. Relevant named evidence may include: Jhimpir wind corridor, mass transit; Ten Billion Tree Tsunami Programme. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge effectiveness by actual emissions avoided and implementation scale; balance long-term mitigation with urgent adaptation. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3 PAKISTAN'S RESPONSE TO CLIMATE CHANGE B-NATIONAL POLICIES (II). RENEWABLE ENERGY

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is renewable energy?	1 × 1 mark: energy from a source naturally replenished on a human timescale. Other accurate equivalent wording should be credited.
Name one renewable energy source used in Pakistan.	1 × 1 mark: solar, wind, HEP, biofuel, tidal or wave energy. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two types of renewable energy.	Award 1 mark for each of any two valid points. Indicative content: solar; wind; hydroelectric power; bioenergy; tidal/wave energy.
Give two advantages of renewable energy.	Award 1 mark for each of any two valid points. Indicative content: replaces fossil-fuel combustion and lowers greenhouse gases; reduces smoke and air pollutants; uses replenishable domestic resources; can reduce fuel imports and diversify supply.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how renewable energy reduces pollution.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: replaces fossil-fuel combustion and lowers greenhouse gases; reduces smoke and air pollutants; uses replenishable domestic resources; can reduce fuel imports and diversify supply.
Describe the use of solar or wind energy in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: solar power uses panels in high-sunshine areas and on roofs; wind power is developed in corridors such as Gharo-Jhimpir; both generate electricity without direct fuel combustion; output is intermittent and needs grid/storage support.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why renewable energy reduces dependence on fossil fuels.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. solar and wind generate electricity without burning coal, oil or gas, so fossil-fuel demand falls; 2. domestic renewable resources replace some imported fuel, improving energy security; 3. off-grid renewable systems can supply remote users without extending fossil-fuel generation. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why renewable energy reduces greenhouse gas emissions.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. solar and wind produce electricity without direct fuel combustion, avoiding carbon-dioxide emissions during operation; 2. renewable electricity can replace fossil-fuel power and charge electric transport, reducing emissions across sectors; 3. biogas can capture methane from waste and replace fuelwood or fossil gas. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of renewable energy for Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: solar, wind and HEP can replace fossil-fuel electricity and reduce emissions and air pollution; domestic renewable resources reduce dependence on imported fuel and improve energy security; decentralised solar or small renewable systems can serve remote areas. Valid alternative/qualification: wind and solar are intermittent and need grids or storage; large HEP has social and environmental costs; renewables do not address all agricultural, industrial or land-use emissions. Relevant named evidence may include: Jhimpir wind corridor, Quaid-e-Azam Solar Park; Tarbela HEP. Supported judgement: judge renewable energy crucial for power-sector mitigation but most effective alongside efficiency, transport and land-use measures. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Renewable energy is the best solution to climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: solar, wind and HEP can replace fossil-fuel electricity and reduce emissions and air pollution; domestic renewable resources reduce dependence on imported fuel and improve energy security; decentralised solar or small renewable systems can serve remote areas. Valid alternative view, limitation or disadvantage: wind and solar are intermittent and need grids or storage; large HEP has social and environmental costs; renewables do not address all agricultural, industrial or land-use emissions. Relevant named evidence may include: Jhimpir wind corridor, Quaid-e-Azam Solar Park; Tarbela HEP. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge renewable energy crucial for power-sector mitigation but most effective alongside efficiency, transport and land-use measures. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3

PAKISTAN'S RESPONSE TO CLIMATE CHANGE B-NATIONAL POLICIES (III). REDUCING GHG EMISSIONS

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What are greenhouse gases?	1 × 1 mark: atmospheric gases that absorb and re-radiate outgoing long-wave radiation. Other accurate equivalent wording should be credited.
Name one greenhouse gas.	1 × 1 mark: carbon dioxide, methane or nitrous oxide. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two ways to reduce greenhouse gas emissions.	Award 1 mark for each of any two valid points. Indicative content: renewable energy and energy efficiency; public transport/electric vehicles and vehicle standards; afforestation; industrial emission controls; better waste management and methane capture.
Give two sources of greenhouse gases.	Award 1 mark for each of any two valid points. Indicative content: carbon dioxide; methane; nitrous oxide; water vapour; fluorinated gases.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how transport contributes to greenhouse gas emissions.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: power stations and industry burning fossil fuels; road transport fuel combustion; livestock and rice farming; deforestation; landfill and waste.
Describe how emissions can be reduced in cities.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: renewable energy and energy efficiency; public transport/electric vehicles and vehicle standards; afforestation; industrial emission controls; better waste management and methane capture.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why electric vehicles reduce emissions.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. electric motors have no exhaust emissions at the point of use; 2. if charged with renewable electricity they replace petrol/diesel CO2; 3. greater efficiency means less energy per journey; benefit is smaller if electricity is fossil-fuelled. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why reducing fossil fuels lowers global warming.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. less coal/oil/gas combustion releases less carbon dioxide; 2. lower greenhouse-gas concentration weakens additional heat trapping; 3. efficiency and renewables also reduce methane leakage and air pollution. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the effectiveness of strategies to reduce emissions.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: renewables, efficiency, public transport, electric vehicles and industrial controls reduce fossil-fuel emissions; afforestation and methane control address land and waste sources; mitigation limits the future scale of warming. Valid alternative/qualification: high capital cost, grid limits and behaviour can slow implementation; adaptation remains essential because current impacts and some future warming cannot be avoided. Relevant named evidence may include: Jhimpir wind corridor, mass transit; Ten Billion Tree Tsunami Programme. Supported judgement: judge effectiveness by actual emissions avoided and implementation scale; balance long-term mitigation with urgent adaptation. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Reducing greenhouse gas emissions is more important than adaptation strategies." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: renewables, efficiency, public transport, electric vehicles and industrial controls reduce fossil-fuel emissions; afforestation and methane control address land and waste sources; mitigation limits the future scale of warming. Valid alternative view, limitation or disadvantage: high capital cost, grid limits and behaviour can slow implementation; adaptation remains essential because current impacts and some future warming cannot be avoided. Relevant named evidence may include: Jhimpir wind corridor, mass transit; Ten Billion Tree Tsunami Programme. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge effectiveness by actual emissions avoided and implementation scale; balance long-term mitigation with urgent adaptation. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3

PAKISTAN'S RESPONSE TO CLIMATE CHANGE C-ADAPTATION STRATEGIES (I). CYCLONE / FLOOD RISK MANAGEMENT

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is a flood?	1 × 1 mark: water overflowing onto land that is normally dry. Other accurate equivalent wording should be credited.
Name one flood management strategy.	1 × 1 mark: early warning, evacuation, embankments, drainage, zoning, reservoir management or wetland restoration. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two flood management methods.	Award 1 mark for each of any two valid points. Indicative content: forecasting, warnings and evacuation; embankments and improved drainage; reservoir operation and flood-storage areas; zoning/raised buildings; wetland and floodplain restoration.
Give two effects of cyclones.	Award 1 mark for each of any two valid points. Indicative content: strong winds damage buildings, crops and power lines; storm surge floods and salinises the coast; heavy rain causes flooding/landslides; people are killed, displaced or lose livelihoods.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how early warning systems reduce risk.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: forecast hazards using weather and river data; send alerts before the event; allow evacuation and protection of property/livestock; emergency services can prepare and deaths fall.
Describe flood protection methods used in Pakistan.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: forecasting, warnings and evacuation; embankments and improved drainage; reservoir operation and flood-storage areas; zoning/raised buildings; wetland and floodplain restoration.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why flood defences reduce damage.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. embankments/barriers keep moderate flows away from settlements; 2. drainage moves stormwater away more quickly; 3. reservoirs/flood-storage areas lower peak discharge; 4. zoning keeps development out of highest-risk land. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why early warning systems save lives.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. forecasting identifies the hazard before impact; 2. alerts give people time to evacuate and protect livestock/property; 3. emergency services can prepare shelters, supplies and rescue teams. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the effectiveness of flood and cyclone management strategies.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: warnings and evacuation save lives; embankments and drainage protect selected areas; wetlands and floodplains store water and provide ecosystem benefits. Valid alternative/qualification: extreme events may exceed protection; hard engineering is costly and can transfer risk; mitigation and adaptation to heat, drought, water and crops are also important. Relevant named evidence may include: 2022 Pakistan floods; Recharge Pakistan; Indus floodplain. Supported judgement: judge flood management a high priority where exposure is greatest, but part of a wider multi-hazard adaptation strategy. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Flood management is the most important climate adaptation strategy." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: warnings and evacuation save lives; embankments and drainage protect selected areas; wetlands and floodplains store water and provide ecosystem benefits. Valid alternative view, limitation or disadvantage: extreme events may exceed protection; hard engineering is costly and can transfer risk; mitigation and adaptation to heat, drought, water and crops are also important. Relevant named evidence may include: 2022 Pakistan floods; Recharge Pakistan; Indus floodplain. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge flood management a high priority where exposure is greatest, but part of a wider multi-hazard adaptation strategy. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.3 PAKISTAN'S RESPONSE TO CLIMATE CHANGE C-ADAPTATION STRATEGIES (II). INCREASING CROP RESILIENCE

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is crop resilience?	1 × 1 mark: the ability of crops or farming systems to withstand and recover from stresses such as drought, heat or flooding. Other accurate equivalent wording should be credited.
Name one drought-resistant crop.	1 × 1 mark: millet (bajra), sorghum (jowar), chickpea, or a correctly identified drought-tolerant crop variety. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two ways farmers adapt to climate change.	Award 1 mark for each of any two valid points. Indicative content: use drought/heat/salt-tolerant seeds; drip irrigation and water conservation; change planting dates; diversify crops and livelihoods; use forecasts, insurance and soil conservation.
Give two effects of drought on crops.	Award 1 mark for each of any two valid points. Indicative content: soil moisture falls and crops wilt/fail; yields and cultivated area decline; fodder and livestock water become scarce; farm income and food supply fall.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how farmers adapt to climate change.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: use drought/heat/salt-tolerant seeds; drip irrigation and water conservation; change planting dates; diversify crops and livelihoods; use forecasts, insurance and soil conservation.
Describe methods to improve crop resilience.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: use drought/heat/salt-tolerant seeds; drip irrigation and water conservation; change planting dates; diversify crops and livelihoods; use forecasts, insurance and soil conservation.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why irrigation improvements help farmers.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. drip/sprinkler systems deliver water to roots and reduce waste; 2. lining canals reduces leakage so more water reaches farms; 3. reliable efficient supply supports yields during drought and reduces waterlogging. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why drought-resistant crops reduce risk.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. deep-rooted or water-efficient varieties maintain growth with less soil moisture, so yields fall less during drought; 2. short-duration varieties mature before water reserves are exhausted; 3. salt- or heat-tolerant varieties survive conditions that would seriously damage ordinary crops. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of crop resilience in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: drought-, heat- and salt-tolerant crops maintain yields under stress; drip irrigation, changed planting dates and forecasts reduce water and weather risk; diversification lowers dependence on one crop. Valid alternative/qualification: seeds, irrigation and advice cost money and may not withstand extreme events; storage, markets, soil fertility and water governance also determine food security. Relevant named evidence may include: drought-resistant millet or sorghum; drip irrigation; Indus Plain farming. Supported judgement: judge crop resilience essential but not sufficient without reliable water, farmer access, markets and disaster protection. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Improving crop resilience is essential for Pakistan's food security." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: drought-, heat- and salt-tolerant crops maintain yields under stress; drip irrigation, changed planting dates and forecasts reduce water and weather risk; diversification lowers dependence on one crop. Valid alternative view, limitation or disadvantage: seeds, irrigation and advice cost money and may not withstand extreme events; storage, markets, soil fertility and water governance also determine food security. Relevant named evidence may include: drought-resistant millet or sorghum; drip irrigation; Indus Plain farming. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge crop resilience essential but not sufficient without reliable water, farmer access, markets and disaster protection. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE A. RECHARGE PAKISTAN PROJECT

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is meant by climate change adaptation?	1 × 1 mark: adjusting human or natural systems to reduce harm from actual or expected climate impacts. Other accurate equivalent wording should be credited.
What is a nature-based solution?	1 × 1 mark: an action that protects, restores or manages ecosystems to address a social or environmental challenge. Other accurate equivalent wording should be credited.
Name the organisation leading the Recharge Pakistan Project.	1 × 1 mark: WWF-Pakistan (working with Pakistan's Ministry of Climate Change and other partners). Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two aims of the Recharge Pakistan Project.	Award 1 mark for each of any two valid points. Indicative content: restore wetlands and floodplains; reduce flood and drought risk; increase groundwater recharge; protect biodiversity; support vulnerable communities.
Name two target areas of the project.	Award 1 mark for each of any two valid points. Indicative content: restored wetlands; floodplains; river basins and sites named in the prescribed Recharge Pakistan case study; award only accurate named locations.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how Recharge Pakistan helps reduce flood risk.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: forecasting, warnings and evacuation; embankments and improved drainage; reservoir operation and flood-storage areas; zoning/raised buildings; wetland and floodplain restoration.
Describe how wetlands are used in the project.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: store and slowly release floodwater; increase infiltration and groundwater recharge; filter water and trap sediment; provide habitat and livelihoods; reduce downstream flood peaks.

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4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why restoring wetlands reduces flooding.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. wetlands temporarily store floodwater, lowering and delaying the downstream peak discharge; 2. vegetation slows runoff and increases infiltration, so less water reaches channels at once; 3. restored floodplains give rivers space to spread away from dense settlements. Credit any other accurate chain that explains how or why the stated outcome occurs.
Explain two reasons why the project improves groundwater supply.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. restored wetlands/floodplains hold water for longer; 2. slower flow allows more infiltration through soil; 3. recharge raises groundwater availability in later dry periods. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the advantages of the Recharge Pakistan Project for local communities.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: restored wetlands and floodplains store floodwater, increase infiltration and recharge groundwater; ecosystem restoration supports biodiversity and local livelihoods; community involvement can improve maintenance and acceptance. Valid alternative/qualification: benefits take time and need land, cooperation and long-term maintenance; extreme floods may exceed natural storage and dense settlements may still need engineered protection. Relevant named evidence may include: Recharge Pakistan; Indus Basin wetlands and floodplains; WWF-Pakistan. Supported judgement: judge cost-effectiveness from avoided damage and multiple long-term benefits, while recognising site limits and extreme-event risk. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Recharge Pakistan is a cost-effective long-term solution for Pakistan." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: restored wetlands and floodplains store floodwater, increase infiltration and recharge groundwater; ecosystem restoration supports biodiversity and local livelihoods; community involvement can improve maintenance and acceptance. Valid alternative view, limitation or disadvantage: benefits take time and need land, cooperation and long-term maintenance; extreme floods may exceed natural storage and dense settlements may still need engineered protection. Relevant named evidence may include: Recharge Pakistan; Indus Basin wetlands and floodplains; WWF-Pakistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge cost-effectiveness from avoided damage and multiple long-term benefits, while recognising site limits and extreme-event risk. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE B. RECHARGE PAKISTAN – ADVANTAGES & DISADVANTAGES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one advantage of the Recharge Pakistan Project.	1 × 1 mark: reduced flood/drought risk, restored wetlands, groundwater recharge, biodiversity protection or improved livelihoods. Other accurate equivalent wording should be credited.
Name one disadvantage of the project.	1 × 1 mark: high cost, slow or uneven benefits, land-use conflict, long-term maintenance needs or limited capacity during extreme floods. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two environmental benefits of restoring wetlands.	Award 1 mark for each of any two valid points. Indicative content: store and slowly release floodwater; increase infiltration and groundwater recharge; filter water and trap sediment; provide habitat and livelihoods; reduce downstream flood peaks.
State two limitations of the project.	Award 1 mark for each of any two valid points. Indicative content: high cost and long-term maintenance; land-use conflict and need for community cooperation; benefits take time and vary by location; extreme floods may exceed natural storage; monitoring and technical capacity are needed.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe the environmental benefits of wetlands restoration.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: store and slowly release floodwater; increase infiltration and groundwater recharge; filter water and trap sediment; provide habitat and livelihoods; reduce downstream flood peaks.
Describe the challenges faced in implementing the project.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: high cost and long-term maintenance; land-use conflict and need for community cooperation; benefits take time and vary by location; extreme floods may exceed natural storage; monitoring and technical capacity are needed.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why the project cannot completely prevent extreme floods.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. extreme floods can exceed wetland/floodplain storage; 2. restoration covers limited areas and needs time/maintenance; 3. upstream rainfall and development may create flows beyond local control. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why community cooperation is important.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. local people maintain sites and report damaging activity; 2. shared benefits create support and reduce conflict/illegal use; 3. local knowledge helps choose workable locations and methods. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the sustainability of the Recharge Pakistan Project.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: restored wetlands and floodplains store floodwater, increase infiltration and recharge groundwater, ecosystem restoration supports biodiversity and local livelihoods; community involvement can improve maintenance and acceptance. Valid alternative/qualification: benefits take time and need land, cooperation and long-term maintenance; extreme floods may exceed natural storage and dense settlements may still need engineered protection. Relevant named evidence may include: Recharge Pakistan; Indus Basin wetlands and floodplains; WWF-Pakistan. Supported judgement: judge cost-effectiveness from avoided damage and multiple long-term benefits, while recognising site limits and extreme-event risk. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Nature-based solutions are more sustainable than engineering solutions." How far do you agree? Use the Recharge Pakistan example. Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: restored wetlands and floodplains store floodwater, increase infiltration and recharge groundwater, ecosystem restoration supports biodiversity and local livelihoods; community involvement can improve maintenance and acceptance. Valid alternative view, limitation or disadvantage: benefits take time and need land, cooperation and long-term maintenance; extreme floods may exceed natural storage and dense settlements may still need engineered protection. Relevant named evidence may include: Recharge Pakistan; Indus Basin wetlands and floodplains; WWF-Pakistan. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge cost-effectiveness from avoided damage and multiple long-term benefits, while recognising site limits and extreme-event risk. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE C. TEN BILLION TREE TSUNAMI PROGRAMME (MITIGATION STRATEGY)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is meant by a mitigation strategy?	1 × 1 mark: an action that reduces greenhouse-gas emissions or increases carbon storage. Other accurate equivalent wording should be credited.
Name one aim of the Ten Billion Tree Tsunami Programme.	1 × 1 mark: increase tree cover, restore degraded ecosystems or store carbon. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two aims of the programme.	Award 1 mark for each of any two valid points. Indicative content: increase tree cover; restore degraded ecosystems; store carbon; protect soil and watersheds; create green employment.
Name two areas where tree plantation is carried out.	Award 1 mark for each of any two valid points. Indicative content: watersheds and degraded forest land; mangrove/coastal restoration areas; community plantations and nurseries; accept accurate named areas from the prescribed case study.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how tree planting helps reduce climate change.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: trees absorb and store carbon dioxide; habitats and food chains are restored; roots protect soil and water catchments; canopy reduces runoff and local heat.
Describe how forests improve environmental quality.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: trees absorb and store carbon dioxide; habitats and food chains are restored; roots protect soil and water catchments; canopy reduces runoff and local heat.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why the programme reduces greenhouse gases.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. growing trees absorb carbon dioxide by photosynthesis; 2. carbon is stored in trunks, roots and soils; 3. restoring forests avoids emissions from degradation and can replace unsustainable fuelwood use. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why forests reduce soil erosion and flooding.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. roots bind soil and stabilise slopes; 2. canopy/litter intercept rain and protect soil; 3. greater infiltration and slower runoff reduce flood peaks. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of the Ten Billion Tree Tsunami Programme for Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: tree growth stores carbon and reduces greenhouse-gas concentration; roots and canopy protect soil, catchments and habitats; nurseries, planting and sustainable forest products can provide local employment. Valid alternative/qualification: benefits take years and depend on survival, native species, protection and monitoring; land and water competition may occur, and tree planting alone cannot replace energy, transport and industrial emission cuts. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangroves; northern watershed forests; community nurseries. Supported judgement: judge the programme important as one long-term measure, but sufficient only when trees survive and it is combined with wider mitigation and adaptation. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"The Ten Billion Tree Tsunami Programme is a sustainable response to climate change." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: tree growth stores carbon and reduces greenhouse-gas concentration; roots and canopy protect soil, catchments and habitats; nurseries, planting and sustainable forest products can provide local employment. Valid alternative view, limitation or disadvantage: benefits take years and depend on survival, native species, protection and monitoring; land and water competition may occur, and tree planting alone cannot replace energy, transport and industrial emission cuts. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangroves; northern watershed forests; community nurseries. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the programme important as one long-term measure, but sufficient only when trees survive and it is combined with wider mitigation and adaptation. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE D. TBTTP – ADVANTAGES & DISADVANTAGES

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one benefit of tree planting.	1 × 1 mark: carbon storage, habitat creation, soil protection, flood reduction, timber or employment. Other accurate equivalent wording should be credited.
Name one limitation of the programme.	1 × 1 mark: slow tree growth, maintenance cost, low seedling survival, land/water competition or weak monitoring. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two environmental benefits of forests.	Award 1 mark for each of any two valid points. Indicative content: timber and fuelwood; jobs, tourism and forest products; soil and watershed protection; carbon storage; habitat and biodiversity; reduced runoff and flooding.
State two problems faced in tree plantation projects.	Award 1 mark for each of any two valid points. Indicative content: watersheds and degraded forest land; mangrove/coastal restoration areas; community plantations and nurseries; accept accurate named areas from the prescribed case study.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how forests support biodiversity.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: trees absorb and store carbon dioxide; habitats and food chains are restored; roots protect soil and water catchments; canopy reduces runoff and local heat.
Describe the economic benefits of tree planting.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: nursery, planting and forestry jobs; timber and non-timber products; tourism and ecosystem-service income; lower flood/erosion damage costs.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why tree plantation takes time to be effective.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. seedlings store little carbon and provide limited canopy at first; 2. roots/canopy need years to develop soil and flood protection; 3. losses from drought, grazing or fire delay full benefits. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why maintenance is needed for planted forests.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. young trees need watering and protection from grazing/fire; 2. replacement of dead seedlings maintains survival and density; 3. monitoring prevents illegal cutting and controls pests/invasive species. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the advantages and disadvantages of tree planting programmes.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: tree growth stores carbon and reduces greenhouse-gas concentration; roots and canopy protect soil, catchments and habitats; nurseries, planting and sustainable forest products can provide local employment. Valid alternative/qualification: benefits take years and depend on survival, native species, protection and monitoring; land and water competition may occur, and tree planting alone cannot replace energy, transport and industrial emission cuts. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangroves; northern watershed forests; community nurseries. Supported judgement: judge the programme important as one long-term measure, but sufficient only when trees survive and it is combined with wider mitigation and adaptation. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Tree planting alone is enough to control climate change in Pakistan." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: tree growth stores carbon and reduces greenhouse-gas concentration; roots and canopy protect soil, catchments and habitats; nurseries, planting and sustainable forest products can provide local employment. Valid alternative view, limitation or disadvantage: benefits take years and depend on survival, native species, protection and monitoring; land and water competition may occur, and tree planting alone cannot replace energy, transport and industrial emission cuts. Relevant named evidence may include: Ten Billion Tree Tsunami Programme; Indus Delta mangroves; northern watershed forests; community nurseries. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge the programme important as one long-term measure, but sufficient only when trees survive and it is combined with wider mitigation and adaptation. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE E. SUSTAINABLE DEVELOPMENT (BOTH CASE STUDIES)

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
What is sustainable development?	1 × 1 mark: development that meets present needs without reducing the ability of future generations to meet their needs. Other accurate equivalent wording should be credited.
Name one way these projects support sustainability.	1 × 1 mark: protect ecosystems, reduce climate risk, store carbon, conserve water or support long-term local livelihoods. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two ways these projects support sustainable development.	Award 1 mark for each of any two valid points. Indicative content: restore ecosystems and biodiversity; store carbon; protect soil and water; reduce disaster risk; provide long-term livelihoods without exhausting resources.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how these projects improve environmental quality.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: restore ecosystems and biodiversity; store carbon; protect soil and water; reduce disaster risk; provide long-term livelihoods without exhausting resources.
Describe how they support local communities.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: create jobs and income; improve water security; reduce flood/drought losses; provide forest/wetland products; involve communities in decisions and management.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why these projects support long-term development.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. wetland restoration reduces future flood losses while improving water and biodiversity, protecting livelihoods over time; 2. tree planting stores carbon and protects soil and catchments, maintaining resources for future use; 3. local jobs and community management link environmental protection with lasting income. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why they reduce climate risks.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. Recharge Pakistan wetlands store floodwater and recharge groundwater, reducing both flood and drought exposure; 2. tree planting stores carbon and slows runoff, reducing warming pressure, erosion and flood risk; 3. community participation improves maintenance and warning or response, so benefits are more likely to continue. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess the importance of sustainable development in climate change responses.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: strategies that protect ecosystems while improving jobs, water and livelihoods are more likely to receive support and last; resource conservation protects water, soil and biodiversity needed for future development; avoiding future hazard damage reduces costs passed to later generations. Valid alternative/qualification: urgent life-saving adaptation or rapid emission reduction may sometimes take priority; projects still involve trade-offs over land, cost and who receives benefits. Relevant named evidence may include: Recharge Pakistan; Ten Billion Tree Tsunami Programme; wetland restoration; community forestry. Supported judgement: judge sustainable development the preferred long-term framework, while allowing urgent action where immediate risk is extreme. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
"Sustainable development is the most important goal of climate change strategies." How far do you agree? Give reasons and examples to support your judgement.	Use the Section A eight-mark levels table. Valid arguments supporting the stated view or principal impact: strategies that protect ecosystems while improving jobs, water and livelihoods are more likely to receive support and last; resource conservation protects water, soil and biodiversity needed for future development; avoiding future hazard damage reduces costs passed to later generations. Valid alternative view, limitation or disadvantage: urgent life-saving adaptation or rapid emission reduction may sometimes take priority; projects still involve trade-offs over land, cost and who receives benefits. Relevant named evidence may include: Recharge Pakistan; Ten Billion Tree Tsunami Programme; wetland restoration; community forestry. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: judge sustainable development the preferred long-term framework, while allowing urgent action where immediate risk is extreme. Credit any other accurate, relevant and developed argument.

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UNIT 1.3.4

CASE STUDY - RESPONDING TO CLIMATE CHANGE F. DECISION-MAKING / CASE STUDY APPLICATION

1-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Name one flood-prone area in Pakistan.	1 × 1 mark: the Indus floodplain in Punjab or Sindh. Other accurate equivalent wording should be credited.
Name one method of flood control.	1 × 1 mark: early warning, evacuation, embankments, drainage, zoning, reservoir management or wetland restoration. Other accurate equivalent wording should be credited.

2-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
State two methods used to reduce flood risk.	Award 1 mark for each of any two valid points. Indicative content: forecasting, warnings and evacuation; embankments and improved drainage; reservoir operation and flood-storage areas; zoning/raised buildings; wetland and floodplain restoration.
State two benefits of wetlands restoration.	Award 1 mark for each of any two valid points. Indicative content: store and slowly release floodwater; increase infiltration and groundwater recharge; filter water and trap sediment; provide habitat and livelihoods; reduce downstream flood peaks.

3-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Describe how floodplains help reduce flood damage.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: store and slowly release floodwater; increase infiltration and groundwater recharge; filter water and trap sediment; provide habitat and livelihoods; reduce downstream flood peaks.
Describe how tree planting improves local environments.	Award 1 mark for each of three distinct, relevant descriptive points. Indicative content: shade and evapotranspiration cool the area; roots bind soil and reduce erosion; canopy slows runoff and lowers flood risk; habitats and air quality improve.

4-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why floodplain restoration may be preferred over embankments.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. it stores floodwater while also recharging groundwater and supporting habitats; 2. it can be lower-maintenance and avoids transferring risk downstream; 3. embankments may offer stronger immediate protection, so preference depends on density, land and flood scale. Credit any other accurate chain that explains how or why the stated outcome occurs.

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QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Explain two reasons why case study strategies reduce climate risks.	Award 1 mark for identifying a valid reason/way and 1 further mark for explaining its linked effect, twice (2 × 2). Do not award the development mark for a repeated idea, a separate unlinked fact or an example on its own. Acceptable explanation chains include: 1. Recharge Pakistan wetlands store floodwater and recharge groundwater, reducing both flood and drought exposure; 2. tree planting stores carbon and slows runoff, reducing warming pressure, erosion and flood risk; 3. community participation improves maintenance and warning or response, so benefits are more likely to continue. Credit any other accurate chain that explains how or why the stated outcome occurs.

5-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
Assess which strategy (mitigation or adaptation) is more effective in Pakistan.	5 × 1 mark: award up to 4 content marks and 1 mark for a supported judgement. Within the four content marks, reserve at least 1 mark for a relevant alternative, limitation or disadvantage. Valid supporting arguments: adaptation such as Recharge Pakistan gives nearer-term protection from floods, drought and water insecurity; adaptation directly protects exposed people and livelihoods even though Pakistan cannot control global emissions alone; mitigation such as tree planting and renewable energy limits future warming and later adaptation costs. Valid alternative/qualification: Pakistan contributes a relatively small share of global emissions, so domestic mitigation alone has limited global effect; adaptation alone becomes inadequate if global emissions continue. Relevant named evidence may include: Recharge Pakistan; Ten Billion Tree Tsunami Programme; Jhimpir wind corridor; Paris Agreement. Supported judgement: judge adaptation more urgent for present Pakistani vulnerability, but a combined strategy is more effective over the long term. Other accurate, relevant material must be credited.

8-MARK QUESTIONS

QUESTION	MARKING GUIDANCE AND INDICATIVE CONTENT
A flood-prone district has limited funds. Should it prioritise (a) embankments or (b) wetland restoration? Give reasons and examples to support your judgement and identify one disadvantage.	Use the decision-making levels table. Valid arguments supporting the stated view or principal impact: embankments give immediate direct protection to dense settlements and farmland; wetlands store and slowly release water, recharge groundwater and support biodiversity and livelihoods. Valid alternative view, limitation or disadvantage: embankments are costly, can fail or transfer risk downstream; wetland restoration requires land and time and may be exceeded by an extreme flood. Relevant named evidence may include: Recharge Pakistan; Indus floodplains and wetlands; 2022 Pakistan floods. A top-level response develops both sides, integrates detailed Pakistan evidence and reaches this supported judgement: with limited funds, prefer wetlands for broad long-term benefits unless a dense settlement needs immediate high-standard protection; explicitly identify the chosen option's disadvantage. Credit any other accurate, relevant and developed argument.

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