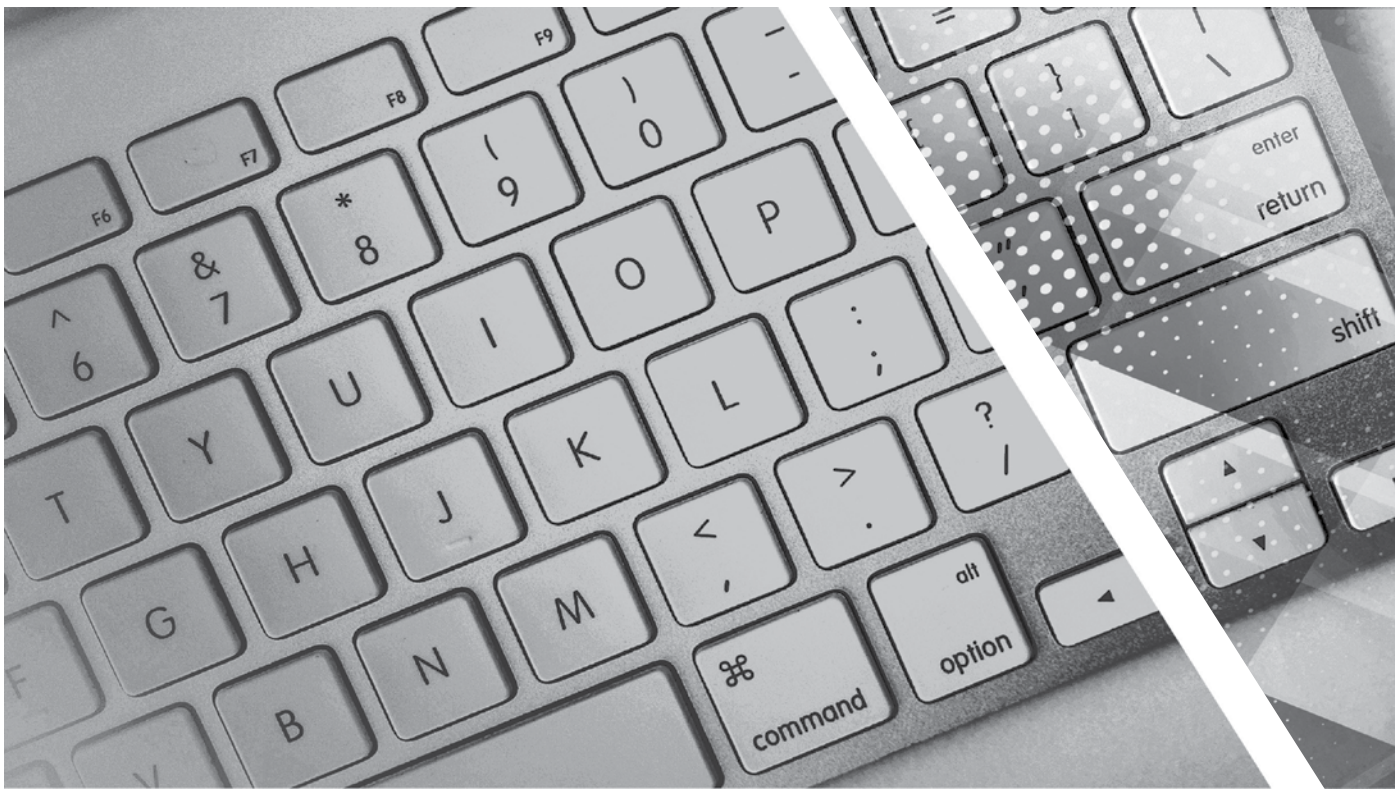
5

KEYBOARD

Computer Science With Application Software

THIRD EDITION



TEACHING GUIDE

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About the Series

The computer in present-day society is an indispensable tool facilitating communication and work. From huge machines weighing several tons, the computer has evolved into light, sleek yet powerful tools that dominate today's knowledge society. Many previously complex and time-consuming tasks have been reduced to the mere touch of a few buttons on the keyboard. Basic computing skills like word processing are an essential requirement in today's job market. The Internet has revolutionised the way people communicate and interact. Geographical distances are no longer a constraint for effective business transactions, information dissemination, and interpersonal interactions, as distances have been overcome through extensive, intricately-designed communication networks.

Today computer science is an academic subject in its own right, governed by scientific and mathematical principles. It is an integral part of what is commonly called STEM (Science, Technology, Engineering, and Mathematics). Due to its increasing importance, computer classes have become an essential part of the education curriculum around the world.

However, the trend has been to favour Information and Communication Technology (ICT) rather than the science behind computers. ICT in schools usually focuses only on teaching how to use office productivity software, such as, word processors, presentation software, and spreadsheets. We, as teachers, should be careful that we teach not only ICT, but also computing, especially in the lower classes. This is an important distinction because ICT primarily involves simply understanding and memorising commands. As a consequence many students may get the impression that there is not much of creativity involved in using computers. This may possibly result in students losing interest in what they mistakenly believe to be computing. Students are not introduced to how computers work and are not provided with the opportunity to be creative through computing activities that challenge them to use their logical and analytical abilities along with being creative.

Computer science education should be such that children later on, if they choose to do so, would be capable of making a meaningful contribution either to further advance our digital society or use digital media optimally in their chosen field of study or work. Computer education in schools should equip every child with the basic understanding of how computers work and with the possibilities of information technology in a knowledge-based society and economy. This has been the rationale for developing this third edition of the **Keyboard** series—***Keyboard: Computer Science with Application Software.***

KEYBOARD: COMPUTER SCIENCE WITH APPLICATION SOFTWARE

Keyboard: Computer Science with application Software, third edition, a series of eight books for Classes 1 to 8, is a comprehensively revised edition of ***Keyboard: Computer Science with application Software***, second edition, and carries forward the very same interesting and interactive approach that is a hallmark of the existing edition. The series aims to make the study of computer science engaging and interactive for students through a combination of interesting features.

The contents are based on the most recent feedback from teachers and incorporate the latest trends in computer education. We have taken particular care to update facts and figures, and to include the latest advancements in the field of information and communication technology. Thus, trendsetting topics such as social networking and cloud computing have been explained along with devices such as smartphones and tablets. Also, in keeping with the times, there is greater focus on animation and web-designing concepts.

The series introduces the subject in a language that is simple and direct. Technical jargon is used only where necessary and all such terms are defined at the end of each chapter. Comic strips, icons, cartoon characters, and illustrations make the learning process an enjoyable experience.

Keyboard: Computer Science with Application Software is an advanced course in computer science meant for those schools that wish to teach creative application software, such as **Flash**, **HTML**, **Photoshop**, and **Dreamweaver**, along with the basic concepts of computers, computer programming, and the Internet. In keeping with the times it also introduces students to sound (**Audacity**) and video-editing **(Lightworks**) software.

COURSE FEATURES AND HIGHLIGHTS

Each chapter in ***Keyboard: Computer Science with Application Software*** starts with an engaging introduction in comic strip format presenting a conversation between two characters, **Goggle** and **Toggle**. Goggle represents an average primary and middle school student, while Toggle is an animated laptop and an expert in computer science. Toggle helps Goggle understand all that is taught about computers and computer software in the series. The series has a hands-on approach to learning with text supported by relevant screenshots, and plenty of practical exercises. The MS Office screenshots are based on **MS Office 2013**, with the compact and user-friendly **Windows 7** as the operating system.

Practice Time, Exercises, In the Lab, and Group Project

Practice Time is a feature that has been a part of all the computer science series we have written, and it has been found by teachers to be a very useful feature. We continue with it in ***Keyboard: Computer Science with Application Software*** also. The feature provides practical exercises after every major topic, in which the student applies the concept(s) learnt in the previous section to solve a practical problem. The detailed solution is given after the question, so that students are able to understand the practical application of a particular concept on their own. This frees the teacher from the process of trying to individually assess whether all the students have properly grasped the concept.

The **Exercises** and **In the Lab** questions in the series deserve particular mention. as they have been developed according to Bloom's Taxonomy. The exercises in each chapter have sufficient theoretical and practical questions for concept application.

Application-Based Questions is a special analytical section within Exercises, aimed at encouraging students to evaluate a picture or a situation, and answer questions based on them.

The **In the Lab** questions are similar to those under **Practice Time** except that the solutions are not given. The questions too are more complex than those found under **Practice Time**. In both, however, the questions describe

a variety of situations across subjects. Thus, both attempt to integrate the use of computers with problem-solving in other subjects.

Group Projects encourage the students to work in collaboration with their peers and implement what they learnt in the lessons.

Worksheets and Assessment Papers

Worksheets have been introduced in Classes I to V, while for Classes VI to VIII **Assessment** and **Comprehensive Assessment** papers have been included.

Teaching Resources

The teacher's resources for the *Keyboard: Computer Science with Application Software*, series have two components: (a) Teaching Guides and (b) Teacher's Digital Resources.

Teaching Guides

The Teaching Guides accompanying each of the coursebooks is carefully structured to provide useful support to teachers.

Each Teaching guide contains the following:

- A **Lesson Plan** that details the periods recommended for a particular chapter, the topics therein, the expected learning outcomes at the end of each topic, and the digital support available for each chapter. This is intended to assist teachers in respect of overall planning. Teachers may go through the lesson plan before stepping into the class or may use the recommendations for creating their own.
- A set of **chapter-wise Worksheets** follows the lesson plans, and has questions in the form of Crossword Puzzles, Word Searches, Jumbled Words, etc. designed to reinforce conceptual understanding.
- In addition to the **Worksheets**, a set of **chapter-wise test papers** has also been provided, which may be used by teachers to create their own assessment papers, or may be used as they are for classroom tests.
- The complete **Answer Key** to the Coursebook Exercises has been given in the teaching guide, including that for the In the Lab questions, Group Project, Worksheets/Assessment papers, Revision Questions, and the Cyber Olympiad Questions.

Digital Resources

The teacher's digital support for the series is accompained by a **Test Generator**.

This comprehensive and easy-to-use **Test Generator** is an effective assessment tool designed to benefit teachers by enabling them to create a variety of test papers.

It has two sections: (a) Coursebook questions (b) Questions beyond the coursebook.

Both include an extensive pool of questions, such as multiple choice, true or false, fill in the blanks, short answer, and long answer questions, as well as lab exercises wherever relevant. Answers have been provided to enable efficient and effective evaluation. The **Test Generator** allows the teacher to create test papers for one or more chapters, with a mix of questions from both the sections. The Student's Books, and the accompanying Teaching Guides and teacher's digital support, together form a complete package enabling one to teach the subject effectively.

Continuous and Comprehensive Evaluation

Learning takes place in a variety of ways — through experience, making and doing things, experi-mentation, reading, discussion, asking, listening, thinking and reflecting, and expressing oneself in speech, movement or writing. All these modes of learning are possible both individually and in groups. It would thus be advantageous for children to be given the opportunity to involve themselves in as many of these activities as possible.

CONTINUOUS AND COMPREHENSIVE EVALUATION (CCE)

The primary objectives of this system are (1) to maintain continuity in evaluation and (2) to reliably assess broad-based learning and behavioural outcomes.

In this system the term 'continuous' is meant to emphasize that evaluation of a student's progress is a continuous process rather than an event. It is spread over the entire span of an academic session, and means regularity of assessment and unit-testing. It also includes a diagnosis of learning gaps, the use of corrective measures, retesting, as well as self-evaluation.

The term 'comprehensive' suggests that the system should cover both scholastic and co-scholastic aspects of a student's growth and development.

This system expects assessment to be both **formative** and **summative**. Formative assessment is a tool used by the teacher to continuously monitor student progress in a supportive environment. It involves regular descriptive feedback, a chance for the student to reflect on the performance, take advice and improve upon it. If used effectively it can improve student performance tremendously.

Summative assessment is carried out at the end of a course of learning. It measures or 'sums-up' how much a student has learned from the course. It is usually a graded test, i.e. it is marked according to a scale or set of grades.

It has been found that assessment that is predominantly of a summative nature will not by itself be able to yield a valid measure of the growth and development of the child. It, at best, certifies the level of achievement only at a given point of time.

The paper-pencil tests are basically a one-time mode of assessment and to exclusively rely on it to decide about the development of a child is both unfair and unscientific. Over-emphasis on examination marks makes children assume that assessment is different from learning. Besides encouraging unhealthy competition, the reliance on a summative assessment system also results in great stress and anxiety among learners.

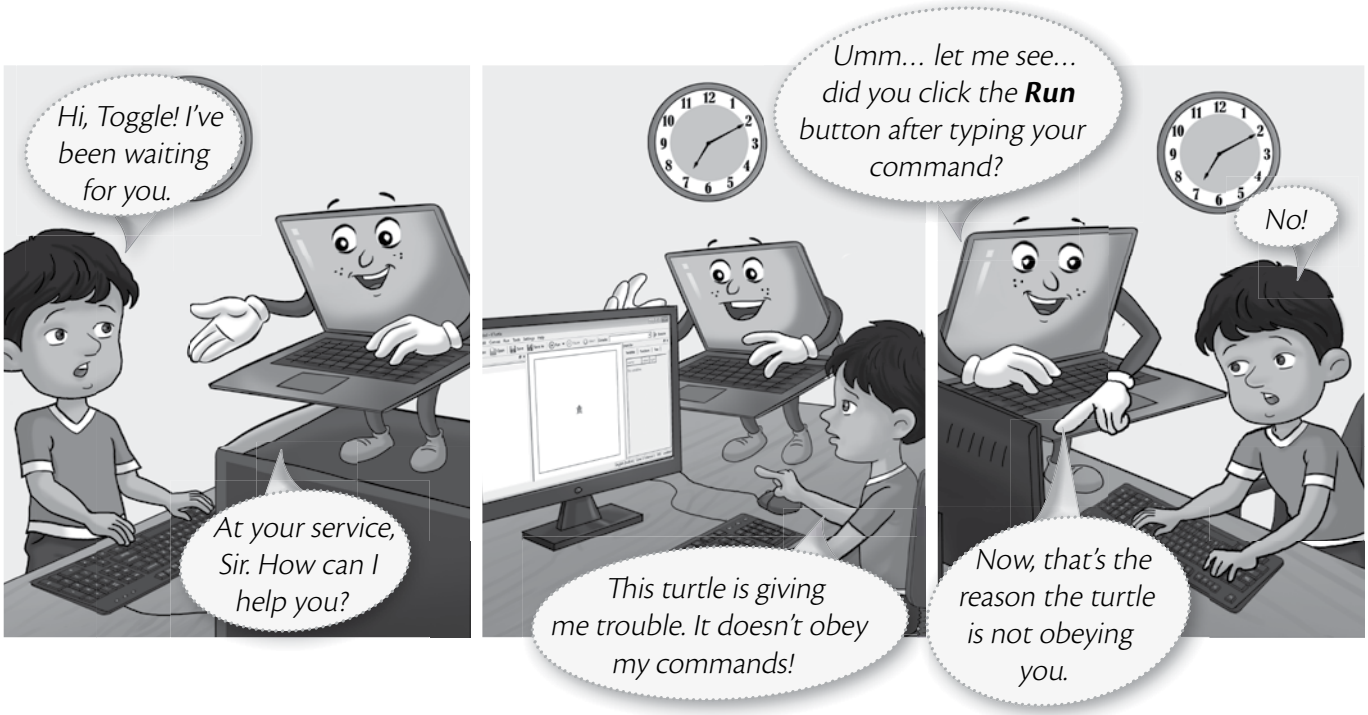
The ***Keyboard: Computer Science with Application Software,*** series, comprising of **Student's Books, Teaching Guides,** and **Digital Resources,** has a number of features that aid both continuous and comprehensive evaluation.

CONTINUOUS EVALUATION

Coursebooks

Beginning of Instruction (Formative Assessment)

- The introductory dialogue at the beginning of each chapter between Goggle and Toggle is a starter to the chapter topic and can be employed to test the prior knowledge of students by using the dialogue to ask for possible solutions or an answer to Goggle's question. For example, in the following dialogue you can also ask them what is the alternative to clicking the **Run** button.



During Instruction (Formative Assessment)

- The conceptual grasp of students can be assessed during instruction through Practice Time, which has been placed after every major topic **in the Student's Book**, by observing how fast they carry out the task as given. A couple of questions may also be added to test their understanding of the concept. For example, in the question below students may be asked if they can use the tl command in the solution to this question instead of the tr command.

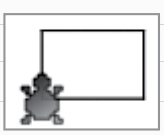
PRACTICE TIME

Tina wants to draw a rectangle of breadth 40 steps and length 60 steps in KTurtle using the `turnright (tr)` command. Can you help her out?

```
1 reset
2 fw 40
3 tr 90
4 fw 60
5 tr 90
6 fw 40
7 tr 90
8 fw 60
9 tr 90
```

SOLUTION

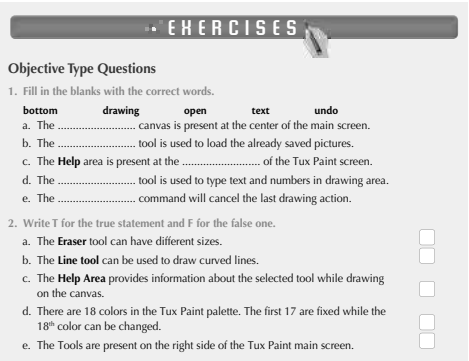
1. Tina should type the code given alongside in the KTurtle Editor pane.
2. After typing the code, she should click the **Run** button.
3. The output will appear as given here.



Note: Try doing the same using the `tl` command also.

End-of-Chapter (Summative Assessment)

- At the end of the chapter the student can be tested on acquired knowledge through the objective and descriptive questions of the **Exercises**, the **Application-Based Questions**, and on the practical application of concepts through **In the Lab** questions, and **Group Project**.


EXERCISES

Objective Type Questions

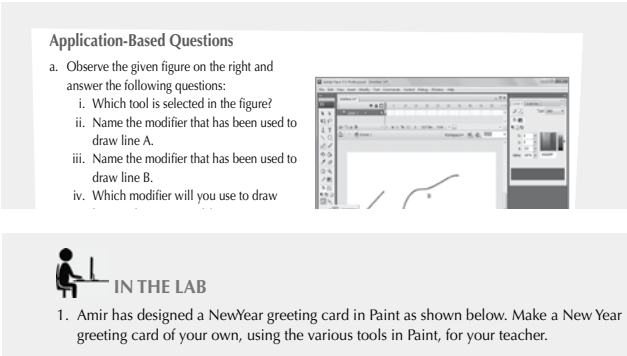
1. Fill in the blanks with the correct words.

bottom drawing open text undo

a. The ..... canvas is present at the center of the main screen.
b. The ..... tool is used to load the already saved pictures.
c. The **Help** area is present at the ..... of the Tux Paint screen.
d. The ..... tool is used to type text and numbers in drawing area.
e. The ..... command will cancel the last drawing action.

2. Write T for the true statement and F for the false one.

a. The **Eraser** tool can have different sizes.
b. The **Line tool** can be used to draw curved lines.
c. The **Help Area** provides information about the selected tool while drawing on the canvas.
d. There are 18 colors in the Tux Paint palette. The first 17 are fixed while the 18th color can be changed.
e. The Tools are present on the right side of the Tux Paint main screen.


Application-Based Questions

a. Observe the given figure on the right and answer the following questions:
   i. Which tool is selected in the figure?
   ii. Name the modifier that has been used to draw line A.
   iii. Name the modifier that has been used to draw line B.
   iv. Which modifier will you use to draw

IN THE LAB

1. Amir has designed a NewYear greeting card in Paint as shown below. Make a New Year greeting card of your own, using the various tools in Paint, for your teacher.

End-of-Unit and Term (Formative as well as Summative Assessment)

- Assessment at the end of a unit, or a set of three or four chapters, is facilitated through **Worksheets** in classes I to V**.**

TEACHING GUIDES

The Teaching guides provide the following support for **formative** and **summative** assessment:

- **Worksheets**, **one for each chapter**, have questions in the form of Crossword Puzzles, Word Searches, Jumbled Words, etc. designed to reinforce conceptual understanding.
- **Test papers**, **one for each chapter**, which may be used by teachers by photocopying them in a larger format for classroom tests.

DIGITAL RESOURCES

The downloadable digital resources are for the series provided accompanied with **Test Generator**.

The Digital resource for *Keyboard: Computer Science with Application Software,* includes:

- **Animations** for the theoretical chapters such as that on operating systems, history of computers, input and output devices, etc. that offer an interesting audio-visual element to technically complex or difficult concepts. There are one or more modules for each such chapter which may be paused at relevant points and feedback taken on what the children have seen, heard, and understood.
- **Demo Videos** that are linked to one of the Practice Times in software chapters (those chapters that describe the features and commands available in a software), and present a step-by-step audio-visual guide to solving the problem described in that particular Practice Time question. One or more objective type question(s) has (have) been introduced at (a) strategic point(s) under the feature **Rapid Round** during the demo to encourage children to participate in the solution to the problem. These questions could be also be used as a formative assessment tool.
- **Interactive Exercises** The **objective type questions** have been made interactive in the form of pop-up screens in which the right answer can be typed in or clicked. Clicking **Submit** will give you feedback, hence these can be used as a formative assessment tool for quick evaluation.

- **Printable documents** for every chapter in the form of soft copies of the worksheets and test papers given in the Teaching Guides. The teacher is free to use either version of the worksheets and test papers as formative assessment tools.
- Additional projects, Cyber Olympiad questions for practice, revision questions, and sample assessment papers (in classes 6 to 8).

The **Test Generator** accompanying **digital resources** is an effective assessment tool designed to benefit teachers by enabling them to create a variety of test papers.

It has two sections: (a) Coursebook questions (b) Questions beyond the coursebook.

Both have an extensive pool of questions including multiple choice, true or false, fill in the blanks, very short answer, and short answer questions, as well as lab exercises wherever relevant. The Test Generator can be used to create test papers for one or more chapters, with a mix of questions from both the sections. The wide variety of objective and descriptive type of questions makes the tool flexible enough for teachers to employ it either for formative or for summative assessment. Answers have also been provided for these questions to aid efficient and effective evaluation by teachers.

COMPREHENSIVE EVALUATION

Comprehensive evaluation involves, as explained above, both the scholastic and co-scholastic aspects of a student's growth and development. It aims to assess the student not only in the area of pure knowledge but also in the areas of their analytical and creative ability, as well as in their general attitudes and aptitudes.

The key features in ***Keyboard: Computer Science with Application Software,*** have been designed to provide both scholastic and co-scholastic development.

Scholastic

- The features such as Did You Know?, Fast Forward, Top Tip, Tricky Terms, and Memory Bytes, enhance and reinforce conceptual knowledge.

Did you Know?

One point equals 1/72th of an inch.

Fast Forward

Font dialog box **Ctrl + D**

Top Tip

Starter images are backgrounds with outlines of images, or 3D photographs, that you can use in Tux Paint.

Tricky Terms

Template A pre-defined design layout that saves time while designing

Objects The elements you place in your publication

Guides They are horizontal and vertical lines

Scratch Area The grey area around the publication page where objects can be placed before insertion in the publication page

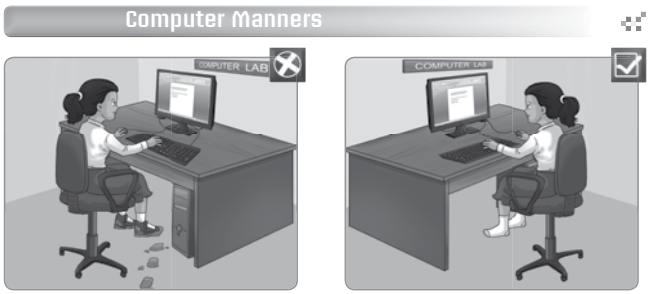
Drop Cap A text-formatting style that enlarges the first letter of the selected text

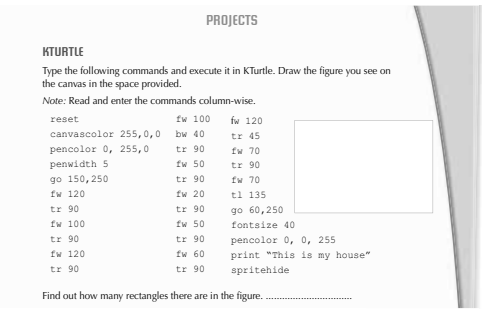
Memory Bytes

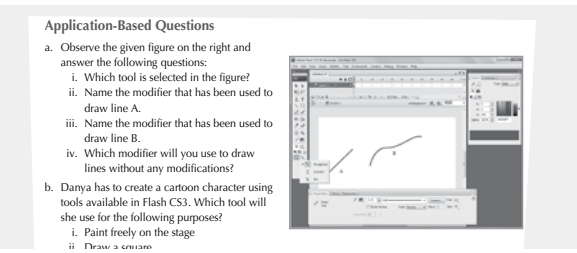
- The AutoFill feature lets you quickly enter a predefined series of data.
- There are two ways to create custom lists: by importing the list or by entering the list in the **Custom Lists** dialog box.
- Filtering selectively displays rows/columns that meet the criteria specified by the user.
- Conditional formatting allows you to set a cell's format according to the conditions you specify.

Co-Scholastic

- The features such as Computer Manners, Projects, and the design of the practical exercises focus both on scholastic and co-scholastic areas by creating awareness on ethical and correct use of computers, as well as the use of computers as a tool for applying their creativity and enhancing their problem-solving skills.







SCHEME OF WORK AND LESSON PLAN

- A **Scheme of work** and **Lesson Plan** have been devised for each chapter which details the number of periods recommended for that chapter, the topics covered in that chapter, the recommended topic-wise allocation of periods, the learning outcomes, and the **downloadable digital resources** available for that chapter.
- The total number of periods in a year for computer science has been taken at 36 assuming one period in a week for the subject.
- Teachers may go through the lesson plan before stepping into the class. However, this is a proposed lesson plan, and teachers are free to modify it as per their teaching styles or teaching sequence in respect of the chapters.

SCHEME OF WORK*

Chapter Title	In this Chapter	Topic-wise Allocation of periods	Learning Outcomes
1. Characteristics and Evolution of Computers	Early Calculating Devices	3	The student should be able to: • briefly describe the various early calculating devices.
	Evolution of Computers	4	• classify computers into different generations based on the technology used. • briefly describe the various first-generation computers. • explain the limitations of different generations of computers.
	Characteristics of Computers	1	• list the characteristics of modern-day computers. • explain the limitations of modern-day computers.
2. Data Devices	Input Devices	1	The student should be able to: • recall the various input devices already learnt in the previous class. • describe the new input devices they have been introduced to, in this lesson.
	Output Devices	2	• recount the various output devices already learnt in the previous class. • detail the new output devices they have been introduced to, in this lesson. • differentiate between Impact and Non- Impact printers.
	Memory	4	• define Memory. • recall that the smallest unit of memory is the bit. • describe the multiple units of memory – KB, MB, GB, and TB. • explain the three types of memory. • differentiate between primary and secondary memory, volatile and non-volatile memory. • discuss the three types of ROM. • appropriately use secondary storage devices.
3. Objects in Word 2013	Inserting WordArt	2	The student should be able to: • define and create WordArt. • format WordArt.
	Inserting Text Boxes	2	• insert and format a text box. • list out the steps involved in changing the shape of a text box.
	Inserting Shapes	1	• explain how to insert different shapes in Word.
	Inserting Pictures	3	• describe the two different ways in which pictures can be inserted. • list the ways in which a picture can be formatted and cropped. • explain how to change the appearance of an image.
	Wrap text	0.5	• explain what text wrapping is and how it can be done.
	Position	0.5	• explain the use of the Position command.

*The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of periods	Learning Outcomes
4. Advanced Features of Word 2013	Headers and Footers	3	The student should be able to: • insert headers and footers. • describe the steps involved in adding date or time and page numbers. • list the steps involved in editing or deleting a header or footer.
	Footnotes and Endnotes	2	• add a footnote and an endnote.
	Page Backgrounds	1	• explain what a watermark is and how to insert one in a Word document. • change page color and apply page borders.
5. KTurtle Loops and Learns!	Comments	0.5	The student should be able to: • define comments and explain its usefulness.
	Comparing Operators	1	• explain what comparing operators are and the two Boolean values.
	Controlling Execution	1.5	• explain the `If` and `If-Else` statements with examples.
	Looping Statements	3	• list the three looping statements in KTurtle. • explain the `Repeat` loop giving an example. • explain the `While` loop with an example. • describe the `For` loop and explain the usefulness of the `Step` command in the `For` loop.
	Break Command	0.5	• define the `break` command.
	Exit Command	0.5	• define the `exit` command.
	Learn Command	1	• define the `learn` command. • explain with various examples how the `learn` command can be used in KTurtle.
6. Making Presentations Interesting	Adding Slides	2	The student should be able to: • add slides to a presentation. • briefly list the steps involved in changing backgrounds of slides.
	INSERT Tab	3	• list the various options available in the **INSERT** tab. • explain what SmartArt Graphics are and how to insert and edit them. • insert a screenshot. • create a photo album. • insert both audio and video files in a presentation.
	Slide Transitions and Animations	2.5	• define the terms: transition and animation. • add a slide transition effect to a presentation. • describe the various animation effects that can be applied to objects on a slide.
	Viewing and Organizing Slides	1.5	• describe the various views present in PowerPoint 2013.
	Slide Shows	1	• create a slide show.
	Printing the Presentation	1	• list the different print layouts available.

*The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of periods	Learning Outcomes
7. Starting Excel 2013	Starting Excel 2013	0.5	The student should be able to: • start Excel 2013.
	Parts of the Excel 2013 Window	1	• identify the different parts of the Excel 2013 window.
	Data Types	0.5	• list the different data types that can be used in Excel 2013 and also demonstrate how data is to be entered in Excel.
	Creating a New Workbook	0.5	• create a new workbook.
	Saving a Workbook	0.5	• save a workbook.
	Selecting Cells	2	• explain the different ways in which cells of a worksheet can be selected.
8. Editing Cell Contents in Excel 2013	Editing and Deleting Cell Contents	2	The student should be able to: • explain the two ways in which contents of a cell can be edited. • delete cell contents.
	Copying and Moving Data	2	• explain the ways in which cell contents can be copied or moved between cells.
	Inserting and Deleting Cells, Rows and Columns	3	• insert cells or a block of cells in a worksheet. • add rows and columns to a worksheet. • delete cells, rows, and columns from a worksheet.
	Changing Row Height	1	• change the row height for a row or for several rows at once.
	Changing Column Width	1	• change the column width of a column or of several columns at once.
9. First Step to the Internet	Internet	1	The student should be able to: • define Internet. • recall the history of the Internet. • debate the uses of the Internet.
	Requirements for Connecting to the Internet	2	• describe the two types of Internet access connections. • explain the use of a modem. • differentiate between dial-up and broadband connection.
			• explain what a dongle is.
	World Wide Web (WWW)	2	• define the terms — WWW, Web browser, Web page, Website, Web address, and home page. • differentiate between a home page and a website. • explain the use of hyperlinks on a web page. • define the term surfing in the context of the Internet.
	Search Engines	1	• define search engine. • explain the working of a search engine. • give a few examples of popular search engines. • search for information on a topic using a search engine.
	E- mail	1	• define email. • list some well-known email service providers. • demonstrate how to send an email.

*The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of periods	Learning Outcomes
	Netiquette	1	• define netiquette. • explain the rules that should be followed while one is online.
	Safety on the Internet	1	• recall the safety rules one should follow while working online.

*The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

LESSON PLANS*

Chapter 1: Characteristics and Evolution of Computers

Time for each lesson: 40 minutes

Resources: a toy Abacus

Introduction (5 minutes)

Before formally beginning the chapter, initiate a discussion with your students regarding the features of desktop computers. You may ask them if they can name the basic devices of a desktop computer or simply tell their functions. Next, tell them how the current desktop computer evolved through different stages before reaching its current size.

Explanation (25 minutes)

Explain the history of computers. Tell them how initially there were no computers and that basic calculations used to be done manually on devices like the Abacus and Napier's bones. It will be a good idea if you can secure a toy abacus to show to your students how calculations used to be done. Next, tell them how the first mechanical calculator, called Pascaline was invented by Blaise Pascal. And from there discuss the five different generation of computers in detail with your students.

Let the students read from the text with your assistance. You may have a discussion time towards the end of the reading to clear any doubts that students may have. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- briefly describe the various early calculating devices.
- classify computers into different generations based on the technology used.
- briefly describe the various first-generation computers.
- explain the limitations of different generations of computers.
- list the characteristics of modern-day computers.
- explain the limitations of modern-day computers.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 2: Data Devices

Time for each lesson: 40 minutes

Resources: dummy computer toys, discarded hard drives

Introduction (5 minutes)

Start the lesson by asking students whether they know what a peripheral device is. Elicit responses from them before introducing the concept of computer peripherals. Write the definition of peripheral devices 'able to be attached to and used with a computer, though not an integral part of it'. Examples include all input, output, and storage devices. You may also bring toy computer parts or discarded hard drives to show to your students.

Explanation (25 minutes)

Encourage your students to recall what input and output devices are. You may also have a brief discussion on the various input and output devices which they learnt in Class 4. Next you may familiarise them with the devices explained in this chapter, i.e. Graphics Tablet, Touch Screen, Visual Display Unit, and the different types of printers. Finally, explain to them what memory means (in computer) and the two types of memory, i.e. primary memory and secondary memory.

Let the students read from the text with your assistance and give them ample time to practice all the computer actions from their textbooks. You can assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- recall the various input and output devices already learnt in the previous class.
- describe the new input and output devices they have been introduced to, in this lesson.
- differentiate between Impact and Non-Impact printers.
- define Memory.
- recall that the smallest unit of memory is the bit.
- describe the multiple units of memory–KB, MB, GB, and TB.
- explain the three types of memory.
- differentiate between primary and secondary memory, volatile and non-volatile memory.
- discuss the three types of ROM.
- appropriately use secondary storage devices.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 3: Objects in Word 2013

Time for each lesson: 40 minutes

Resources: MS Word 2013, computer lab

Introduction (5 minutes)

Begin the lesson by encouraging students to recall what they learnt about MS Word in Class 4. Have a brief discussion on the various functions that they studied in their previous year.

Explanation (25 minutes)

For this lesson, you may take your students to the computer lab. Introduce them to WordArt as a feature that helps style text in MS Word 2013.Talk them through the process of creating and formatting WordArt. You may give them time to practice this themselves in the computer lab. Next, explain to them that pictures can also be inserted in MS Word 2013. Demonstrate this to them along with how to format and adjust the position of any image.

Let the students read from the text with your assistance and give them ample time to perform the Practice Time question from their textbooks. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- Define, create, and format WordArt.
- insert and format a text box.
- list out the steps involved in changing the shape of a text box.
- explain how to insert different shapes in Word.
- describe the two different ways in which pictures can be inserted.
- list the ways in which a picture can be formatted and cropped.
- explain how to change the appearance of an image.
- explain what text wrapping is and how it can be done.
- explain the use of the Position command.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 4: Advanced Features of Word 2013

Time for each lesson: 40 minutes

Resources: MS Word 2013, computer lab

Introduction (5 minutes)

Before beginning the chapter, discuss with students the features of MS Word 2013 learnt in the previous chapter. Encourage everyone to participate in this discussion.

Explanation (25 minutes)

For this lesson, you may take your students to the computer lab. Explain to them the concept of headers and footers. Demonstrate how to add a header or a footer, and the different options that they have in them. Similarly, explain what endnotes and footnotes are. Talk them through the process of inserting a footnote and an endnote.

Let the students read from the text with your assistance and give them ample time to practice all the examples from their textbooks. You can also have them perform the Practice Time question, taking turns. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- insert headers and footers.
- describe the steps involved in adding date or time and page numbers.
- list the steps involved in editing or deleting a header and footer.
- add a footnote and an endnote.
- explain what a watermark is and how to insert one in a Word document.
- change page colour and apply page borders.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 5: KTurtle Loops and Learns

Time for each lesson: 40 minutes

Resources: KTurtle, computer lab

Introduction (5 minutes)

Begin the lesson by asking students to recall what they learnt about KTurtle in their previous years. Have a small discussion in which they can talk about the different features that they have studied over the past year.

Explanation (25 minutes)

Explain to students what a comment is in KTurtle and how to write one. Describe the different comparing operators mentioned in the textbook and ensure that students are clear about them. Demonstrate how the 'If' and 'If-Else' statements work and where to use which one. Similarly, explain and demonstrate the different looping statements mentioned in the chapter. Ensure that you give your students ample time to practice all the examples that the textbook covers. Finally, explain and demonstrate the break, exit, and learn command.

Let the students read from the text with your assistance and give them ample time to practice all the Practice Time questions from their textbooks. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- define comments and explain its usefulness.
- explain what comparing operators are and the two Boolean values.
- explain the If and If-Else statements with examples.
- list the three looping statements in KTurlle.
- explain the Repeat loop and the While loop with an example.
- describe the For loop and explain the usefulness of the Step command in the For loop.
- define break, exit, and learn commands.
- explain with various examples how the learn command can be used in KTurtle.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 6: Making Presentations Interesting

Time for each lesson: 40 minutes

Resources: MS PowerPoint 2013, computer lab

Introduction (5 minutes)

Begin the lesson by asking students to recall what they learnt about PowerPoint 2013 in their previous year. Have a small discussion in which they can talk about the different features that they have studied over the past year.

Explanation (25 minutes)

For this lesson, you may take your students to the computer lab. Demonstrate how to insert slides in a PowerPoint presentation. Introduce them to the various ways in which they can make their presentations more interesting (by inserting pictures, shapes, effects, sounds, etc.) Explain to them the importance of the INSERT tab and how it contains all the commands for inserting objects in a presentation. Describe how SmartArt Graphics work and how to insert them. Similarly, how to insert audio/video files and how to create a photo album in MS PowerPoint.

It is also important that you demonstrate to your students how to add effects (both transitions and animations) and how to record narrations in their presentation.

Let the students read from the text with your assistance and give them ample time to practice all the examples from their textbooks. You may also have them perform the Practice Time questions given in the chapter. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- add slides to a presentation.
- briefly list the steps involved in changing backgrounds of slides.
- list the various options available in the INSERT tab.
- explain what SmartArt graphics are and how to insert and edit them.
- insert a screenshot.
- create a photo album.
- insert both audio and video files in a presentation.
- define the terms: transition and animation.
- add a slide transition effect to a presentation.
- describe the various animation effects that can be applied to objects on a slide.
- describe the various views present in PowerPoint 2013.
- create a slideshow.
- list the different print layout available.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 7: Starting Excel 2013

Time for each lesson: 40 minutes

Resources: MS Excel 2013, computer lab

Introduction (5 minutes)

Introduce students to MS Excel 2013 as a software that helps in the calculation and analysis of numerical data using different formulas and functions. You may have a small discussion in which you can ask students to share whatever they know about MS Excel.

Explanation (25 minutes)

For this lesson, you may take your students to a computer lab. Demonstrate to them the various elements of MS Excel 2013. Explain data types and how to enter data in MS Excel. Ensure that students are given ample time to perform all the different Excel related actions mentioned in the textbook. This will help them in their next lesson as well.

Let the students read from the text with your assistance and give them time to perform all the Practice Time questions from their textbooks. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- start Excel 2013.
- identify the different parts of the Excel 2013 window.
- list the different data types that can be used in Excel 2013 and also demonstrate how data is to be entered in Excel.
- create and save a new workbook.
- explain the different ways in which cells of a worksheet can be selected.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 8: Editing Cell Contents in Excel 2013

Time for each lesson: 40 minutes

Resources: MS Excel 2013, computer lab

Introduction (5 minutes)

Begin the lesson by asking students to recall what they learnt about MS Excel in their previous lesson. Have a small discussion in which they can talk about the different features that they have studied over the past few weeks.

Explanation (25 minutes)

For this lesson, take your students to the computer lab. Have them divide in groups of two and ask them to make a list of 5 of their favourite movies in MS Excel. In the next column ask them to rate those movies from 1–10. Then ask their partners to edit those ratings and include their own ratings as well. An example is demonstrated below:

Skyscraper	5/10–9/10

Now explain to them the different kinds of editing methods in Excel. Show them how to move, copy, and delete data. Also, demonstrate how to insert and delete rows and columns, as well as how to change column width and row height.

Let the students read from the text with your assistance and give them ample time to practice all the Practice Time questions from their textbooks. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- explain the two ways in which contents of a cell can be edited.
- delete cell contents.
- explain the ways in which cell contents can be copied or moved between cells.
- insert cells or a block of cells in a worksheet.
- add and delete rows and columns in a worksheet.
- change the row height for a row or for several rows at once.
- change the column width of a column or of several columns at once.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 9: First Step to the Internet

Time for each lesson: 40 minutes

Resources: dummy modem, cable, broadband

Introduction (5 minutes)

Begin the lesson by asking students whether they know what an 'Internet' is. Elicit responses from them on what they think the Internet is. You may have a short discussion on how they use the Internet, e.g. the activities that they normally carry out on the Internet.

Explanation (25 minutes)

Tell your students about the history of the Internet. Talk them through the various devices that are needed/ can be used to connect to the Internet. You may also show them those devices if you have brought them with you to class. Explain to them the difference between dial-up, broadband, wireless broadband, and wireless mobile broadband. Describe all the terminologies used in the chapter properly, and ensure that students are not confused between them. Give them examples of the various search engines like Google, Opera, Yahoo etc. Finally inform them of the etiquette that needs to be followed when using the Internet.

Let the students read from the text with your assistance. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- define Internet.
- recall the history of the Internet.
- debate the uses of the Internet.
- describe the two types of Internet access connections.
- explain the use of a modem.
- list some of the well-known ISPs in Pakistan.
- differentiate between dial-up and broadband connection.
- explain what a dongle is.
- define the terms: WWW, Web Browser, Web page, Website, Web address, and home page.
- differentiate between a home page and a website.
- explain the use of hyperlinks on a web page.
- define the terms surfing in the context of the Internet.
- define search engine.
- explain the working of a search engine.
- give a few examples of popular search engines.
- search for information on a topic using a search engine.
- define email.
- list some well-known email service providers.
- demonstrate how to send an email.
- define netiquette.
- explain the rules that should be followed while one is online.
- recall the safety rules one should follow while working online.

Conclusion (10 minutes)

Have a discussion on any one on the topics mentioned in the teacher's notes, given at the end of the chapter.

*. The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

ANSWER KEY TO THE COURSEBOOK

- The complete Answer Key to the Coursebook Exercises has been given here including that for the In the Lab questions, Group project, Worksheets/Assessment papers, Revision Questions, and the Cyber Olympiad Questions.
- These are only suggested answers, and variations are possible especially for the open-ended questions, such as the descriptive questions, and those of In the Lab. Teachers may use their discretion while checking the answers provided by the students, and give them marks based on conceptual accuracy and conceptual clarity.

Chapter 1 Characteristics and Evolution of Computers

OBJECTIVE TYPE QUESTIONS

1. a. i. Mark I b. ii. Blaise Pascal c. iii. Very Large Scale Integrated Circuit

d. i. EDSAC e. i. Charles Babbage

DESCRIPTIVE TYPE QUESTIONS

1. a. Characteristics of second-generation computers:
   - They used transistors.
   - They were smaller, faster, cheaper, and more efficient than first-generation computers.
   - They relied on punched cards for input.

   b. The major limitations of first-generation computers are:
   - Their operating speed was low.
   - Their power consumption was very high.
   - They required large space for installation.
   - They were highly expensive.
   - They could solve only one problem at a time.

   c. Computer technology has become an integral part of our lives. We use and depend on computer technology in our daily lives to learn, communicate, do business, travel, and live comfortably. Some areas where advances in computer technology have a great impact are given below.
   - People use the Internet and social media to exchange ideas. During elections, political leaders use radio, television, and social media to persuade and inform people about their agendas.
   - Computers are used in offices to keep track of accounts, money, and for making presentations.
   - Students use computers for their projects and teachers use computers to keep track of grades and type out instructions for their students. Smartboards, computers, mobile phones, iPads, projectors, and the Internet are also being used in the classroom.
   - Hospitals and pharmacies use computers to keep a record of patients, their medical history, and the medications they require. It helps research in medical science.
   - Computer graphics are used in different fields of arts and entertainment and are developing day by day.
   - The production and manufacturing process in industries is also managed by computer technology.

   d. Some of the early calculating devices are listed below:
   - Abacus
   - Napier's bones
   - Pascaline
   - Difference Engine
   - Analytical Engine

   Today, the Abacus is still used commonly in Japan, China, the Middle East, and Russia. The modern Abacus is a tool that is used to teach students mental calculation. Students form strong visual images of numbers in their head after using the abacus. They are taught to move the beads in their head, as if they were using a physical abacus.

e. Napier's Bones comprised of a calculating device which had numbers carved on bones or wooden strips which were used for addition, subtraction, multiplication, division, and square root. Pascaline was the first mechanical calculator consisting of a rectangular box with movable wheels. Unlike Napier's Bones, the Pascaline was used for calculations of hundreds and thousands; hence, it was much more advanced.

f. The biggest advantage of using microprocessors was that it contained all the components of a CPU on a single chip which reduced the size of computers and increased their efficiency.

g. This is an open-ended question and students may come up with different responses. They may define artificial intelligence as the ability of a machine to imitate intelligent human behaviour. Although it is now being used in classrooms in many countries of the world, however, it is not likely to replace teachers in the near future. It will assist teachers and will play a significant role in reshaping the way teachers teach and students learn.

APPLICATION-BASED QUESTIONS

a. i. First-generation computers

ii. 1940-1958

iii. The major limitations of first-generation computers are given below.

- Their operating speed was low.
- Their power consumption was very high.
- They required large space for installation.

b. i. Artificial Intelligence is a branch of computer science that aims to create computers that can think, behave, and react in the same way as humans do.

ii. Fifth-generation computers

c. i. Computers are versatile because they can perform different types of jobs efficiently.

ii. Diligence is the ability of being able to work efficiently and accurately over a long period of time. Computers are diligent because they do not suffer from boredom or lack of concentration and continue working efficiently till power is supplied to them.

iii. Accuracy is another characteristic of computers. It means that if the data entered into the computer is correct, then the result produced will be accurate.

IN THE LAB

1. The students should be encouraged to collect information on various generations of computers and paste pictures and create a chart showing the different generations. (**Hint**: There are five generation of computers.)
2. IBM Summit, Cray Titan students should find more from the Internet.
3. Students should be encouraged to search for the desired information on the Internet by the teachers or elders at home.
4.

Generation	Size	Main component used	Efficiency
First	very large	vacuum tubes	solve only one problem at a time
Second	smaller than first-generation computers	transistors	more efficient
Third	smaller	Integrated Circuits (chips)	high
Fourth	small	very Large Scale Integrated Circuits	very High

5. This is an open-ended question and students may give different responses. Computers of the future are going to be faster and smaller and hence, it is going to be easy to integrate them into very small devices.

   Computers may be able to communicate and interact with humans in a human-like manner. They may be able to analyse and reason as human beings. They may be able to develop a sense of humour. As they can carry out operations with great precision and at very high speeds, the possibility of human error will be greatly reduced. They may even replace human workforce in offices, hospitals, construction sites, and industries all together. We may also use them for daily household chores and makes our lives much easier in the future.

GROUP PROJECT

Before playing this game, the teacher and students could browse the Internet to get basic knowledge of how to play trivia quiz games. This activity will enable them to devise their own game. The name of the game could be Computer Trivia. The rules could be as follows:

1. Place the cards face down on the table.
2. Next to each pile of trivia cards, write the name of the group.
3. On a blank piece of paper, write names of each group member to keep score.
4. Each group leader asks one of their questions from their pile of trivia cards from the other groups. Groups take turns to do this.
5. The game is declared to be officially over, when any group has correctly answered four out of five questions.

   The timeline for the history of computers is given below, as a guide for trivia questions.

   1801: In France, Joseph Marie Jacquard invents a loom that uses punched wooden cards to automatically weave fabric designs. Early computers use similar punch cards.

   1822: English mathematician, Charles Babbage, conceives of a steam-driven calculating machine that would be able to compute tables of numbers.

   1890: Herman Hollerith designs a punch card system to calculate the 1880 census. He establishes a company that ultimately becomes IBM.

   1939: Hewlett-Packard is founded by David Packard and Bill Hewlett in a garage.

   1941: Atanasoff and his graduate student, Clifford Berry, design a computer that can solve 29 equations simultaneously. This marks the first time a computer is able to store information on its main memory.

   1943–1944: John Mauchly and J. Presper Eckert, build the Electronic Numerical Integrator and Calculator (ENIAC).

   1946: Mauchly and Presper receive funding from the Census Bureau to build the UNIVAC, the first commercial computer for business and government applications.

   1947: William Shockley, John Bardeen and Walter Brattain of Bell Laboratories invent the transistor.

   1953: Grace Hopper develops the first computer language, which eventually becomes known as COBOL.

   1954: The FORTRAN programming language is developed by a team of programmers at IBM.

   1958: Jack Kilby and Robert Noyce unveil the integrated circuit, known as the computer chip.

   1970: The newly formed Intel unveils the Intel 1103, the first Dynamic Access Memory (DRAM) chip.

   1971: Alan Shugart leads a team of IBM engineers who invent the 'floppy disk', allowing data to be shared among computers.

   1973: Robert Metcalfe develops Ethernet to connect multiple computers and hardware.

   1976: Steve Jobs and Steve Wozniak start Apple Computers and roll out the Apple I, the first computer with a single-circuit board.

1981: The first IBM personal computer is introduced. It also popularizes the term PC.

1985: Microsoft announces Windows.

1990: Tim Berners-Lee develops HyperText Markup Language (HTML), giving rise to the World Wide Web.

1994: PCs become gaming machines.

1996: Sergey Brin and Larry Page develop the Google search engine.

1999: The term Wi-Fi becomes part of the computing language; users begin connecting to the Internet without wires.

2004: Facebook, a social networking site, is launched.

2005: YouTube, a video sharing service, is founded.

2007: The iPhone brings many computer functions to the smartphone.

2010: Apple unveils the iPad, introducing tablets.

2015: Apple releases the Apple Watch.

Chapter 2 Data Devices

OBJECTIVE TYPE QUESTIONS

1. a. i. VDU b. ii. Hard copy c. i. Input devices

d. iii. both i and ii e. i. Information

DESCRIPTIVE TYPE QUESTIONS

a. Secondary memory is known as non-volatile memory.

b. KB MB GB TB

c. A graphics tablet allows the computer user to draw images by hand with a special pen called a stylus. The image is visible on the monitor as one draws but does not appear on the tablet. A touch screen is a computer display screen that recognizes touch input. The user interacts with the computer by touching words or pictures on the screen. I think the touchscreen is a very useful mechanism, as it makes user interaction very easy; a graphics tablet is limited to professional use.

d. A shopkeeper will use a dot matrix printer to print out receipts, as it provides an efficient way of printing multiple carbon copies in low quality. Very high-quality printing is not required for receipts and hence this is cost effective. Nowadays, however, stores do ask if the person requires a receipt. Receipts lead to so much wastage of paper and are not environment-friendly; it is also possible to send receipts through the computer to email addresses or mobile phones as text messages, and hence prevent paper wastage.

e. The computer does not lose all data when it is switched off. It has non-volatile memory, which saves and retains its data when you turn the power off and volatile memory which does not save its data when you turn the power off.

f. Students might give different responses to this question. They may prefer to store their homework files on a flash drive, which is easy to use and a handy way to transfer data. It comes in various storage capacities and this also makes it convenient because the files to be saved may be of different sizes.

APPLICATION-BASED QUESTIONS

a. i. Graphics Tablet
   ii. Stylus
   iii. Graphics Tablet is an input device that enables a user to draw images by hand.

b. i. The size of a monitor is measured by the diagonal length of its screen.
   ii. Soft Copy
   iii. Visual Display Unit

c. i. 1 TB
   ii. GB: GigaByte TB: TeraByte
   iii. USB

IN THE LAB

1.

Input Devices	Output Devices	Secondary Storage Devices
Keyboard	Printer	USB
Touch Screen	VDU	DVD
Microphone	Speakers	Hard disk

2. ATM: In ATMs, touch screens are used for carrying out various transactions and providing input to the ATM machine.

   Mobile phones and Tablet: In mobile phones and tablets, touch screens are used for carrying out various functions such as making calls, playing games, writing texts, etc. Mobile phones can be fully touch screen or partially touch screen depending upon their make and model.

3. Students should be encouraged to search for information on different USBs available in the market, along with their capacities, on the Internet (under the guidance of elders).

4. The advantages and disadvantages of different storage devices are given below.

Name of storage device	Advantages	Disadvantages
Floppy disk	• cheap • can be used repeatedly • easy to transport and handle	• requires a special drive • store much less data than a CD or flash drive
Hard disk	• allows data to be stored in one place different storage capacities • stores data much faster • Data is not lost when you turn off the computer.	• consumes a lot of power • large in size • can be broken if dropped
CD/DVD Blu-ray	• mass storage capacity • high data stability	• easily broken • require a special drive • expensive
Flash Drive	• easy to transport • can resist scratches • Flash drives are universal (can fit in any computer).	• can get infected by a virus • easy to lose • Anyone can access your files if the flash drive is lost.

GROUP PROJECT

Ask the children to be creative in writing clues similar to those given below.

CLUE	Guess
Abbreviation for digital versatile disc	DVD
Made up of platters	Hard disk

Chapter 3 Objects in Word 2013

OBJECTIVE TYPE QUESTIONS

1. a. F b. T c. T d. F e. F

2. a. iv. all of these b. i. No Outline c. iii. both i and ii d. i. Cropping e. ii. **FORMAT**

DESCRIPTIVE TYPE QUESTIONS

1. a. WordArt gallery includes different styles that can be applied to any text.

   b. The steps to crop an image are:
   - Select the image.
   - Click the **FORMAT** tab that appears under **PICTURE TOOLS**.
   - In the **Size** group, click the **Crop** command.
   - The **Cropping handles** will appear around the image. Click, hold and drag a handle to crop the unwanted part of the image. Click the **Crop** command again to crop the image.

   c. Yes, it is important to make the headline attractive to make the subject of the poster eye-catching. The reason why WordArt gallery gives a number of choices to make the headline attractive is because this feature will make it popular and widely-used by people.

   d. Adding pictures will make your document more informative. Inserting images of varying sizes will create a more artistic feel to the document. If there is not enough space and you have to create a one page article, it may help to vary the sizes of the pictures in order to adjust all the content onto one page.

   e. To remove the trees from my photo, the image will be cropped. To crop the trees, the following steps will be taken:
   - Select the complete image.
   - Click the Format tab under Picture Tools.
   - Click the Crop command in the Size group.
   - The image will have Cropping Handles around it. Click hold and drag the handle to crop the trees. Click the Crop command again to crop the image.
   - If the competition requires just the picture of a house, then having the trees may disqualify the entry; hence, this attention to detail is crucial.

   f. The options in the 'Adjust' group are Corrections, Color, and Artistic Effects. The Correction option allows the user to sharpen or soften an image by adjusting the brightness and contrast of the image. The Color option allows the user to adjust the saturation, tone, or colour of the image. It is also possible to add artistic effects such as watercolors.

g. Text-wrapping is a valuable feature of the Word program because it helps start a new line for text automatically when a word in a sentence reaches a border of a text box or image. The text will flow around these boxes automatically so the user doesn't have to format it manually which may be a laborious task.

APPLICATION-BASED QUESTIONS

a. i. **INSERT** tab, **Illustrations** group and **Shapes** option are used to insert the given shapes in a Word document.

ii. **FORMAT** tab, **Shape Fill** and **Shape Outline** option commands.

iii. To change the order of the shapes:

- Right-click the shape you want to move.
- From the context menu that appears, select the desired option, i.e. **Send to Back** in this case.

b. i. **INSERT** tab, **Pictures** option

ii. Two ways to insert online pictures:

- **Office.com ClipArt:** This option allows you to access Microsoft's online collection of free clipart. You can choose from a large selection of images.
- **Bing Image Search:** This option can be used to search the Internet for images.

iii. Office.com ClipArt

c. To change the order of the shapes:

i. Right-click the shape you want to move.

ii. From the context menu that appears, select the desired option, like **Bring to Front** or **Send to Back** or any of their submenu options.

IN THE LAB

1. To create a poster in Word 2013:

i. Start Word 2013 and create a new document.

ii. To insert online picture:

a. Select **INSERT** tab.

b. Click **Online Pictures** button under **Images** group.

c. The **Insert Pictures** dialog box appears.

d. Type the search term in **Office.com Clip Art** and press **Enter**.

e. The search results will appear in the dialog box. Select the desired images and click **Insert.**

f. The images will appear in the document. Arrange them on the page using the **Position** command in the **Arrange** group on the **FORMAT** tab under **PICTURE TOOLS**.

iii. To insert a shape:

a. Click at the position where you want to insert a shape.

b. Click the **INSERT** tab. In the **Illustrations** group, click the **Shapes** option and select the desired shape.

c. Click, hold and drag the mouse to draw the shape.

d. You can change the size, shape style, fill color, outline color, etc. of the shape using the **Shapes Styles** group commands on the **FORMAT** tab under **DRAWING TOOLS**.

iv. To insert and format the WordArt:

a. Place the insertion point at the position where you want to insert a WordArt object.

b. Click the **INSERT** tab.
c. In the **Text** group, click the **WordArt** option and select the desired **WordArt style.**
d. A placeholder appears in the document.
e. Replace the placeholder with "Art & Craft Summer Classes".
f. To change the shape of the text:
   i. Select the text box or the text in the text box.
   ii. Click the **FORMAT** tab.
   iii. In the **WordArt Styles** group, click the **Text Effects** option. Choose **Transform** and select an effect.
g. To change the fill color, click the drop-down menu arrow of the **Text Fill** option in the **WordArt Styles** group and select the desired color.
h. To apply the text effects, click the drop-down menu arrow of the **Text Effects** option in the **WordArt Styles** group. Select **Glow** and the desired option in the submenu. Then select **Transform** and choose the effect in the submenu.

2. To create a poster in Word 2013:
   i. Start Word 2013 and create a new document.
   ii. To insert online picture:
      a. Select **INSERT** tab.
      b. Click **Online Pictures** button under **Images** group.
      c. The **Insert Pictures** dialog box appears.
      d. Type the search term in **Office.com Clip Art** and press **Enter**.
      e. The search results will appear in the dialog box. Select the desired images and click **Insert.**
      f. The images will appear in the document. Arrange them on the page using the **Position** command in the **Arrange** group on the **FORMAT** tab under **PICTURE TOOLS**.
   iii. To insert a shape:
      a. Click at the position where you want to insert a shape.
      b. Click the **INSERT** tab. In the **Illustrations** group, click the **Shapes** option and select the desired shape.
      c. Click, hold, and drag the mouse to draw the shape.
      d. You can change the size, shape style, fill color, outline color, etc. of the shape using the **Shapes Styles** group commands on the **FORMAT** tab under **DRAWING TOOLS**.
   iv. To insert and format WordArt:
      a. Place the insertion point at the position where you want to insert a WordArt object.
      b. Click the **INSERT** tab.
      c. In the **Text** group, click the **WordArt** option and select the desired **WordArt style.**
      d. A placeholder appears in the document.
      e. Replace the placeholder with "INTER-SCHOOL KARATE COMPETITION 2019".
      f. To change the shape of the text:
         i. Select the text box or the text in the text box.
         ii. Click the **FORMAT** tab.
         iii. In the **WordArt Styles** group, click the **Text Effects** option. Choose **Transform** and select an effect.

g. To change the fill color, click the drop-down menu arrow of the **Text Fill** option in the **WordArt Styles** group and select the desired color.

h. To apply the text effects, click the drop-down menu arrow of the **Text Effects** option in the **WordArt Styles** group. Select **Glow** and the desired option in the submenu. Then select **Transform** and choose the effect in the submenu.

3. To design a cover page in Word:

   i. Start Word 2013 and create a new document.

   ii. To insert online picture:

      a. Select **INSERT** tab.

      b. Click **Online Pictures** button under **Images** group.

      c. The **Insert Pictures** dialog box appears.

      d. Type the search term in **Office.com Clip Art** and press **Enter**.

      e. The search results will appear in the dialog box. Select the desired images and click **Insert.**

      f. The images will appear in the document. Arrange them on the page using the **Position** command in the **Arrange** group on the **FORMAT** tab under **PICTURE TOOLS**.

   iii. To insert a shape:

      a. Click at the position where you want to insert a shape.

      b. Click the **INSERT** tab. In the **Illustrations** group, click the **Shapes** option and select the desired shape.

      c. Click, hold and drag the mouse to draw the shape.

      d. You can change the size, shape style, fill color, outline color, etc. of the shape using the **Shapes Styles** group commands on the **FORMAT** tab under DRAWING TOOLS.

   iv. To insert and format the WordArt:

      a. Place the insertion point at the position where you want to insert a WordArt object.

      b. Click the **INSERT** tab.

      c. In the **Text** group, click the **WordArt** option and select the desired **WordArt style.**

      d. A placeholder appears in the document.

      e. Replace the placeholder with "My Selected Poems".

      f. To change the shape of the text:

         i. Select the text box or the text in the text box.

         ii. Click the **FORMAT** tab.

         iii. In the **WordArt Styles** group, click the **Text Effects** option. Choose **Transform** and select an effect.

      g. To change the fill color, click the drop-down menu arrow of the **Text Fill** option in the **WordArt Styles** group and select the desired color.

      h. To apply the text effects, click the drop-down menu arrow of the **Text Effects** option in the **WordArt Styles** group. Select **Glow** and the desired option in the submenu. Then select **Transform** and choose the effect in the submenu.

      Elements such as WordArt, shapes, and pictures will be included in the cover page.

4. To design an attractive cover for the register:

   i. Start Word 2013 and create a new document.

   ii. To insert online picture:

      a. Select **INSERT** tab.

b. Click **Online Pictures** button under **Images** group.
c. The **Insert Pictures** dialog box appears.
d. Type the search term in **Office.com Clip Art** and press **Enter**.
e. The search results will appear in the dialog box. Select the desired images and click **Insert.**
f. The images will appear in the document. Arrange them on the page using the **Position** command in the **Arrange** group on the **FORMAT** tab under **PICTURE TOOLS**.

iii. To insert a shape:
a. Click at the position where you want to insert a shape.
b. Click the **INSERT** tab. In the **Illustrations** group, click the **Shapes** option and select the desired shape.
c. Click, hold and drag the mouse to draw the shape.
d. You can change the size, shape style, fill color, outline color, etc. of the shape using the **Shapes Styles** group commands on the **FORMAT** tab under DRAWING TOOLS.

iv. To insert and format the WordArt:
a. Place the insertion point at the position where you want to insert a WordArt object.
b. Click the **INSERT** tab.
c. In the **Text** group, click the **WordArt** option and select the desired **WordArt style.**
d. A placeholder appears in the document.
e. Replace the placeholder with "Teachers' Attendance Register".
f. To change the shape of the text:
i. Select the text box or the text in the text box.
ii. Click the **FORMAT** tab.
iii. In the **WordArt Styles** group, click the **Text Effects** option. Choose **Transform** and select an effect.
g. To change the fill color, click the drop-down menu arrow of the **Text Fill** option in the **WordArt Styles** group and select the desired color.
h. To apply the text effects, click the drop-down menu arrow of the **Text Effects** option in the **WordArt Styles** group. Select **Glow** and the desired option in the submenu. Then select **Transform** and choose the effect in the submenu.

5. To remove the extra farm animals from the image, it will be cropped. The following steps will have to be taken:
- Select the complete image.
- Click the Format tab under Picture Tools.
- Click the Crop command in the Size group.
- The image will have Cropping Handles around it. Click, hold, and drag the handle to crop the rest of the animals, making sure just a single one remains.
- Click the Crop command again to crop the image.

To text-wrap around the picture of the animal, the following steps will be taken.
- Select the image.
- Click the Format Tab under Picture Tools.
- Click the Wrap Text command in the Arrange group.
- Move over the different options, it will give different options.
- Select the preferred option.
- The text will wrap around the image.

GROUP PROJECT

Each group member can research and type in two reasons why water is so important. Each one can have a turn in changing their text into decorative art using Word Art. You can also add pictures to convey a more effective message and to make your poster visually attractive.

To make the text decorative, carry out the following steps:

- Select the text you want to convert.
- Click the Insert tab.
- Click the WordArt drop-down arrow in the Text group.
- Word will automatically create a text box for the text.
- The text will appear in the selected style.

Students may come with different ideas; you can give them the following passage, if required. Let them format it in their way.

The Importance of Water

Water is an essential requirement in our life. We can only survive a few days without drinking water. Water comprises an approximate of 70 to 80% of total body mass. Water also helps in all major functions of the body like circulation, excretion, absorption, respiration, etc. Water is of prime importance to plants for their nutrition, growth, and formation of food. Seeds can germinate only if there is water; then they become plants or trees. Water carries away waste from the Earth's surface into the oceans, and in this way, keeps the Earth's surface clean and fit for living. Industrial waste which has been treated well can be safely disposed of in water. Due to water's ability to evaporate and condense, there is sufficient fresh water for drinking and for irrigation. Water provides life for many marine animals and plants.

Worksheet—1

1. Search for the names of three early calculating devices in the grid given below.

A	B	P	D	R	T	Y	U	J	K	L	R
A	B	A	C	U	S	J	Y	T	F	D	F
H	T	S	N	B	D	C	G	H	J	A	S
R	T	C	J	H	R	E	W	Q	T	Y	K
S	N	A	P	I	E	R	B	O	N	E	S
A	S	L	R	T	H	T	D	E	R	R	T
T	E	I	G	H	J	T	R	E	D	W	E
Q	W	N	W	E	R	T	S	D	A	Z	X
E	R	E	E	R	W	D	F	T	G	H	J

2. Who am I?

a. Charles Babbage b. Vacuum tube c. ENIAC d. Bit e. RAM

3. Identify and name the following figures.

a. Hard Disk b. A Chip c. Floppy Disk

4. Name the tab and the group that has the following options in Word 2013.

a. **INSERT** tab, **Illustrations** group
b. **INSERT** tab, **Text** group
c. **INSERT** tab, **Text** group
d. **INSERT** tab, **Illustrations** group

5. Do as directed.

a. Cropping. b. WordArt c. False d. iv. all of these e. FORMAT

Chapter 4 Advanced Features of Word 2013

OBJECTIVE TYPE QUESTIONS

1. a. iv. all of these b. iii. both i and ii c. iii. Endnotes
d. ii. Footnote e. iii. REFERENCES

DESCRIPTIVE TYPE QUESTIONS

1. a. The steps to add a watermark are:
   i. Click the **DESIGN** tab. In the **Page Background** group, click the **Watermark** option and select **Custom Watermark**.
   ii. The **Printed watermark** dialog box appears.
      a. To insert a picture as watermark:
         - Select the **Picture watermark** option. Click **Select Picture…** button. The **Insert Pictures** dialog box appears.
         - Search the required picture select it and click **Insert**. Then click **OK** in the **Printed watermark** dialog box. The picture will be inserted as a watermark.
      b. To insert text as a watermark:
         - Click **Text watermark** option. Type in the text you want as a watermark, and click **Ok**.

   b. The header of a word document may contain the document name, chapter name, page number, and date. It is an important feature because it tells us about the contents of each document.

   c. Student answers may vary. A sample response is given below.

   The steps I would take to add a date to the letter are:
   - Double-click in the header area.
   - Place the insertion point after the address.
   - Click the Date & Time in the Insert group.
   - The Date & Time dialog box will appear.
   - Select the date format. Click Ok.
   - The current date will appear.

   We can use the Date & Time feature to maintain a diary for a month and within a document we can add many headers, thereby separating each day of the month from the next. The benefits of writing an online diary is saving paper and thereby, protecting the environment. Also, many features of Word can help in writing the diary and presenting it beautifully.

d. I feel that it is better to give the meanings of words in footnotes because they are easier to find. To read a footnote, I can just glance down to the bottom of a page. If it is in brackets or otherwise within the text, it may take away from the flow of the essay. Text in the footer will provide me with an organised way of listing the meanings of the different words.

e. A watermark is an image or text placed behind the document text. Many people add watermarks to their photos, so as to discourage editing, copying, or other manipulation.

f. An author of a historical novel would rather use endnotes than footnotes. The use of endnotes creates a cleaner look on each page and a smoother flow of reading, since there are no distractions. Endnotes are easier to compile and print, since you do not have to reformat individual pages to fit them in.

APPLICATION-BASED QUESTIONS

a. i. **REFERENCES** tab, **Footnotes** group
   ii. **Symbol** option
b. i. Footer
   ii. **INSERT** tab, **Header & Footer** group
   iii. **Citation & Bibliography** group in the **REFERENCES** tab.
c. i. **DESIGN** tab of the **HEADER & Footer Tools** option
   ii. Yes

IN THE LAB

1. To create a document in Word 2013:
   i. Start Word 2013 and create a new document.
   ii. To insert online picture:
      a. Select **INSERT** tab.
      b. Click **Online Pictures** button under **Images** group.
      c. The **Insert Pictures** dialog box appears.
      d. Type "input devices" in **Office.com Clip Art** and press **Enter**.
      e. The search results will appear in the dialog box. Select the desired images and click **Insert.**
      f. The images will appear in the document. Arrange them on the page using the **Position** command in the **Arrange** group on the **FORMAT** tab under **PICTURE TOOLS**.
   iii. To insert footnotes & endnotes:
      a. Position the cursor at the point where you want to insert a reference mark.
      b. Click the **REFERENCES** tab and do one of the following:
         - Click **Insert Endnote** or **Insert Footnote** in the **Footnotes** group.

         This inserts the note reference at once. Go to Step d.

         Or

         Click the **Footnote and Endnote** dialog box launcher to display the **Footnote and Endnote** dialog box.
      c. In the **Footnote and Endnote** dialog box:
         - Select **Footnotes** or **Endnotes** as required.
         - In the **Number format** box, select a format for the note reference. In the **Start at** box, type or select a value for the first note reference.

- You can use a symbol instead of a numerical or alphabetical note reference. Click **Symbol** to display the **Symbol** dialog box, select a symbol, and click **OK**.
- Click **Apply** to close the **Footnote and Endnote** dialog box. Word inserts the reference in your document.

d. The cursor will now move next to the footnote or endnote number at the bottom of the page or at the end of the document. Type the text for the endnote or footnote.

e. Double-click the footnote or endnote number to return to the document.

2. To create an invitation letter in Word 2013:

i. Start Word 2013 and create a new document. Type the invitation letter.

ii. To add a watermark:

a. Click the **DESIGN** tab. In the **Page Background** group, click the **Watermark** option and select **Custom Watermark**.

b. The **Printed watermark** dialog box appears.

iii. To insert a picture as watermark:

a. Select the **Picture watermark** option. Click **Select Picture…** button. The **Insert Pictures** dialog box appears.

b. Search the required picture and insert. Then click **OK** in the **Printed watermark** dialog box. The picture will be inserted as a watermark.

iv. To change the color of the page click the **Page Color** option and select the desired color.

v. To apply **Page Borders**:

- Click the **Page Borders** option. This will open the **Borders and Shading** dialog box with the **Page Border** tab selected.
- You can choose simple (line) border or an artistic border.
- Click **OK**.

3. To create a document in Word 2013:

i. Start Word 2013 and create a new document.

ii. To insert header:

a. Click the **INSERT** tab.

b. Click **Header** in the **Header & Footer** group. You will see the **Header** gallery with different header designs.

c. Click the **Blank** header style or scroll down to choose any other style. You will now see the **DESIGN** tab under **HEADER & FOOTER TOOLS**. This tab appears only when your cursor is in the header or footer area.

d. The cursor will be placed in the header area of the document. Type the header text i.e. Amazing Facts of Pakistan.

iii. The steps to add page numbers as footer to a document are:

a. Click **Footer** in the **Header & Footer** group to display the **Footer** gallery. Click the footer style you want. The footer will be displayed in the document.

b. Double-click anywhere in the footer area.

c. The **DESIGN** tab for the **HEADER & FOOTER TOOLS** will appear.

d. Click the **Page Number** command in the **Header & Footer** group. Bring the mouse pointer to the **Current Position** option and select the desired numbering style. The page number will appear in the document at the position desired in the style chosen.

4. The message you are trying to convey and sell requires a strong, compelling headline. On average, five times as many people read the headline as those that read the rest of the poster. People are mostly in a hurry, they may just take a quick look at a poster before they move on to something else. If your point is not immediately obvious, chances are that the reader will miss the message. So the images, colours, and fonts, used in the headline in the header and the message in the footer are most important.

   When you write copy for the poster, you must know:

   - Who your readers are, their likes, dislikes, etc.
   - How the readers think
   - What information the readers need

   You must do your research. To write an effective message, you must know your audience.

   Never talk down to your readers. Speaking down to your audience is going to turn them away. Treat them with respect and let that reflect in your copy. You want people to envisage how your message will improve their lives. The more information you provide, the more convincing your message will be.

GROUP PROJECT

Ask the children to research this topic carefully. They need to find exercises that will be beneficial to people who spend a lot of time on their computers. You can also use pictures of the different exercises along with instructions to compile the small booklet. Also they should set their alarms on the computer clock so it rings after thirty minutes to remind them that they have had so much screen time and need to get up and take a break. It would be beneficial for them to do these exercises in the break.

Chapter 5 KTurtle Loops and Learns!

OBJECTIVE TYPE QUESTIONS

1. a. ii. `break` b. ii. `exit` c. iv. `if` d. iii. `repeat` e. i. `and`

DESCRIPTIVE TYPE QUESTIONS

1. a. The for command, also called the **counting loop**, is the command that keeps the count for the loop. After every loop, the number is increased by 1 by default. In case the step size is given, the loop increases or decreases by the specified number. Yes, a variable can be used instead of a number.

   b. Loops are used in programming when we want the computer to run a set of commands repeatedly till a certain condition is met. This is effective, especially when we want to listen to something repeatedly or watch something many times.

   c. The advantage of using Boolean values is that they show whether the given values are true or false. The system checks whether the relationship of a statement to the truth is Yes or No.

   d. Let us suppose the variables contain numbers: $a = 6 and $b = 8. Look at the table for a better understanding of the use of comparing operators.

Operators	Result
$a == $b	False
$a != $b	True
$a > $b	False
$a < $b	True
$a >= $b	False
$a <= $b	True

e. The REPEAT loop is repeated as many times as the given number whereas the WHILE loop is repeated till the Boolean value is true. Once the Boolean value becomes false, the execution of the program stops.

f. I will use the Exit command when I want to finish executing the program, as opposed to the Break command which will only go on to stop the current loop and transfer control to the statement following the loop.

g A sample command is given below.

```
learn box $x {
repeat 36 {
forward $x
turnleft 10 } }
```

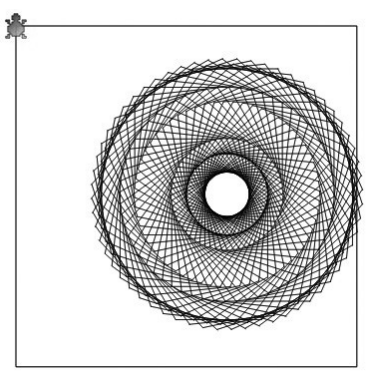
For example,

```
$a = ask ("Enter your age")
if $a >= 18 {
message "You are eligible to vote"
}
else {
message "You are not eligible to vote"
}
```

APPLICATION-BASED QUESTIONS

a. i. Line numbers 2, 3, 4 and 13 are comment statements.

ii.



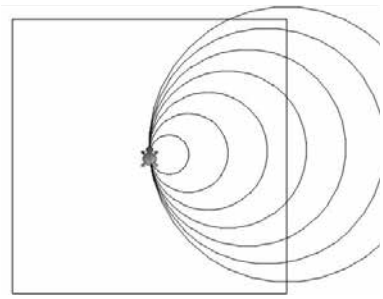
iii. The turtle moves to the top-left corner of the canvas.

b. i. 7 times

ii.

```
reset
for $a = 5 to 35 step 5{
repeat 36 { fw $a tr 10 }}
```

iii.



c. i.

```
10
7
4
1
```

ii.

```
5
7
9
11
13
15
```

iii.

```
4
5
6
7
8
9
10
```

IN THE LAB

1.
```
reset
$a = ask ( "Enter a number" )
if $a < 5 {message "The number is less than 5"}
if $a > 5 {message "The number is greater than 5"}
if $a == 5 {message "The number is equal to 5"}
exit
```

2. a.
```
reset
$a = 1
while $a <= 10 {
print $a
forward 10
$a = $a + 2 }
```

b.
```
reset
for $a = 1 to 10 step 2{
print $a
forward 10 }
```

3. a.
```
reset
$a = ask ("Enter a number")
$i = 1
while $i <= 10 {
print $a * $i
forward 10
$i = $i + 1
}
```

b.
```
reset
$a = ask ("Enter a number")
for $i = 1 to 10 {
print $a * $i
forward 10 }
```

4. Create a command square using the **`learn` command :**

```
learn square $length {
repeat 4 { fw $length tr 90 }
}
```

a. Drawing a square of size 50 points: `square 50`

b. Drawing a square of side 90 points: `square 90`

GROUP PROJECT

Ask the children to make different shapes with KTurtle. They can combine the shapes to make a new school logo.

Triangle (3 sides): repeat 3{fw 100 tr 120}

Square (4 sides): repeat 4{fw 100 tr 90}

Pentagon (5 sides): repeat 5{fw 100 tr 72}

Hexagon (6 sides): repeat 6{fw 100 tr 60}

Septagon (7 sides): repeat 7{fw 80 tr 51}

Octagon (8 sides): repeat 8{fw 70 tr 45}

A full circle is drawn with 360 degrees and a semicircle with 180 degrees.

A circle can be drawn using the repeat command, i.e. repeat 360 times.

Chapter 6 Making Presentations Interesting

OBJECTIVE TYPE QUESTIONS

1. a. ii. Add shape left b. iii. Images c. iv. both ii. and iii.
d. iv. Set Up e. iii. Editing View

DESCRIPTIVE TYPE QUESTIONS

a. The quickest way to create a presentation is with the Themes feature which provides the user with a set of colours, fonts, and special effects. The quickest way is not always the best way, as it may not give us the necessary time to put in details and our personal touch.

b. If I want to be more creative and choose my own colours, fonts, and special effects for my presentation, then I would not use Themes. With Themes, I would have to stick to their sets and that may not give my work the stamp of individuality I want.

c. We can use Hierarchy which is a SmartArt graphic to create a family tree. It is an easy graphic to use because it is a ready-made graphic and all we have to do is fill the information in.

d. It is preferable to use the 'cycle' graphic rather than the 'process' graphic to show the transformation of a caterpillar into a butterfly because the butterfly then repeats the cycle and the cycle goes on.

e. To avoid the hassle of copying the addresses and phone numbers from a website, the feature that we can use is Screenshot in the Images group.

APPLICATION-BASED QUESTIONS

a. i. Templates or Themes

ii. To create a presentation using **Themes**: Click **FILE ► New ► Themes.**

Or

If a **Blank Presentation** is already in use, click **DESIGN** tab and under **Themes** group, select a theme of your choice.

b. i. The numbers tell the sequence in which objects will run in the slide show.
   ii. A star symbol appears.
   iii. Yes. To add more than one animation to the same object:
   - In the **ANIMATIONS** tab, under the **Advanced Animations** group, click **Add Animation** button.
   - In the drop-down menu that appears, select the animation of your choice.

c. i. Slide Sorter View ii. Notes Page View iii. Reading View
   iv. Outline View v. Normal View

IN THE LAB

1. To create this presentation:
   a. Click **FILE ► New ► Blank Presentation**.
   b. In slide 1 type the title of the presentation, i.e. Generations of Computers.
   c. To add new slides, click the **HOME** tab and then in the **Slides** group, click **New Slide**. Select a layout of your choice. Repeat this step to create rest of the slides.
   d. To insert pictures in your slides, click on **Pictures** or **Online Pictures** in the **Images** group. In the window that appears search and select a clip art of your choice and click **OK**.
   e. To add SmartArt graphics:
      i. Click the **INSERT** tab.
      ii. Click on **SmartArt** in the **Illustrations** group. The **Choose a SmartArt Graphic** dialog box appears.
      iii. Select a category, and then select a graphic layout and click **OK**.
      iv. The SmartArt graphic will appear on the current slide. Click **[Text]** in each box and type the text.
   f. Add animations to all the slides as follows:
      i. Select the text or picture.
      ii. Click the **ANIMATIONS** tab. In the **Animation** group, click the **More** arrow and select the animation. You can add more than one animation to a single object.
   g. To add a transition effect between slides:
      i. Select any slide.
      ii. Click the **TRANSITIONS** tab. Under **Transition to This Slide** group, click the **More** arrow and select the desired transition scheme.
      iii. In the **Timing** group, do the following:
      - Set the **Duration**.
      - Select **On Mouse Click** under **Advance Slide.** Click **Apply To All**.

2. To create this presentation:
   a. Click **FILE ► New ► Blank Presentation**.
   b. In slide 1 type the title of the presentation, i.e. Package Tour to Jodhpur.
   c. To add new slides, click the **HOME** tab and then in the **Slides** group, click **New Slide**. Select a layout of your choice. Repeat this step to create rest of the slides.
   d. To add an audio file:
      i. Click on **Audio** in the **Media** group on the **INSERT** tab and insert your sound or audio file in the desired slide or slides.

ii. Select the sound icon, and click the **PLAYBACK** tab under **AUDIO TOOLS**.

iii. In the **Audio Options** group, click the drop-down menu arrow of the **Start** box and select **Automatically.**

e. To add a video file:

i. Click **Video** in the **Media** group on the **INSERT** tab, and insert your video file.

ii. Select the file and click **PLAYBACK** tab under **VIDEO TOOLS**.

iii. In the **Video Options** group, click the drop-down menu arrow of the **Start** box and select **On Click**.

f. Add animations to all the slides as follows:

i. Select the text or picture.

ii. Click the **ANIMATIONS** tab. In the **Animation** group, click the **More** arrow and select the animation. You can add more than one animation to a single object.

g. To add a transition effect between slides:

i. Select any slide.

ii. Click the **TRANSITIONS** tab. Under **Transition to This Slide** group, click the **More** arrow and select the desired transition scheme.

iii. In the **Timing** group, do the following:

- Set the **Duration**.
- Select **On Mouse Click** under **Advance Slide.** Click **Apply To All**.

3. To create this presentation:

a. Click **FILE ► New ► Blank Presentation**.

b. In slide 1 type the title of the presentation, i.e. Balanced Diet and its Merit.

c. To add new slides, click the **HOME** tab and then in the **Slides** group, click **New Slide**. Select a layout of your choice. Repeat this step to create rest of the slides.

d. Add animations to all the slides as follows:

i. Select the text or picture.

ii. Click the **ANIMATIONS** tab. In the **Animation** group, click the **More** arrow and select the animation. You can add more than one animation to a single object.

e. To add a transition effect between slides:

i. Select any slide.

ii. Click the **TRANSITIONS** tab. Under **Transition to This Slide** group, click the **More** arrow and select the desired transition scheme.

iii. In the **Timing** group, do the following:

- Set the **Duration**.
- Select **On Mouse Click** under **Advance Slide.** Click **Apply To All**.

4. To create this presentation:

a. Click **FILE ► New ► Blank Presentation**.

b. In slide 1 type the title of the presentation, i.e. Microsoft Office 2013.

c. To add new slides, click the **HOME** tab and then in the **Slides** group, click **New Slide**. Select a layout of your choice. Repeat this step to create rest of the slides.

d. To add a screenshot:

i. Click the slide where you want to add a screenshot.

ii. Click the **INSERT** tab. Click on **Screenshot** in the **Images** group.

iii. Do one of the following:
- To add the whole window, click the desired thumbnail in the **Available Windows** gallery.
- To add a part of the window, click **Screen Clipping**, and when the pointer becomes a cross **+**, press and hold the left mouse button to select the area of your screen that you want to capture.
- If you have many windows open, click the window you want to clip from before clicking **Screen Clipping**. When you click **Screen Clipping**, the program you are working in is minimized and only the window that you selected is available for clipping.

e. Add animations to all the slides as follows:

i. Select the text or picture.

ii. Click the **ANIMATIONS** tab. In the **Animation** group, click the **More** arrow and select the animation. You can add more than one animation to a single object.

f. To add a transition effect between slides:

i. Select any slide.

ii. Click the **TRANSITIONS** tab. Under **Transition to This Slide** group, click the **More** arrow and select the desired transition scheme.

iii. In the **Timing** group, do the following:
- Set the **Duration**.
- Select **On Mouse Click** under **Advance Slide.** Click **Apply To All**.

5. A PowerPoint photo album is a presentation that you can create to display your photographs. To create a photo album, carry out the following steps.

- Go to Insert. Click the arrow under Photo Album, then New Photo Album.
- In the Photo Album dialog box, under Insert picture from, click File/Disk.
- In the Insert New Pictures dialog box, locate and click the folder that contains the picture that you want to insert. Then click Insert.
- If you want to change the order in which the pictures are displayed to get the pictures in chronological order, under Pictures in album, click the file name of the picture that you want to move.
- Then use the arrow buttons to move it up or down in the list.
- In the Photo Album dialog box, click Create.

GROUP PROJECT

Ask the children to make a visually interesting PowerPoint presentation with great pictures and short catchy messages. You may give them some basic dental hygiene tips for young children:

- Brush your teeth in the correct manner.
- Brush for at least two minutes, twice daily.
- Floss regularly.
- Limit intake of candy and aerated drinks.
- Stop snacking at night.
- Visit the dentist regularly.

Worksheet—2

1. Crossword

1. Animation	2. Transition	3. **INSERT**	4. **DESIGN**
5. Normal	6. Screenshot	7. Theme	8. Slide sorter

2. Who am I?

a. Header b. **INSERT** c. Break command d. Footer

3. Observe the code given below:

a.
```
reset
$a = 1
while $a <=4
{
forward 100
turnright 90
$a = $a + 1
}
```

b.
```
reset
for $a = 1 to 4
{
forward 100
turnright 90
}
```

4. The set of command to draw a square using the `learn` statement is given below but some of the information is missing. Complete the program.

```
learn square $a {
repeat 4 { forward $a turnright 90} }
```

a. `penwidth 5`

b. `square 50 ; square 90`

Chapter 7 Starting Excel 2013

OBJECTIVE TYPE QUESTIONS

1. a. iv. F8 b. iv. Web Layout View c. ii. Name Box

d. iv. all of the above e. i. CTRL + A

DESCRIPTIVE TYPE QUESTIONS

1. a. There are 3 ways of selecting the cell range B1:F5:

- **Using the Mouse**: To select a range of cells using the mouse,
  i. Click the cell from which the selection has to start, i.e. B1.

ii. Now, holding the left mouse button, drag the mouse pointer to the diagonally opposite corner cell i.e. F5.

- **Using the Extend Selection Mode:** To select a range using the Extend Mode,
  i. Click the starting cell of the range, i.e. B1.
  ii. Press F8 to activate the **Extend Selection** mode.
  iii. Click the last cell of the range, i.e. F5. The range of cells will be selected.
- **Using the Go To command:** To select a range using the Go To command,
  i. Click the cell at one corner of the range, i.e. B1.
  ii. Click the **HOME** tab.
  iii. In the **Editing** group, click the **Find & Select** button.
  iv. Click **Go To** or press **F5** or press **Ctrl + G**.
  v. In the cell address that appears, type the cell address of the opposite corner of the range, i.e. B1, in the **Reference** text box or select the range.

b. The three main benefits of using Excel are that it helps in calculation, in analysing data using formulas and tables, and in creating graphs and charts.

c. The Quick Access Toolbar is useful as it gives quick access to commands that are used frequently including the Save, Undo, and Redo commands.

d. The worksheet is a single page spreadsheet or page in Excel, where you can write, edit, and manipulate data, whereas the collection of such worksheets is referred to as a workbook. It is important to know this difference because whilst a worksheet is a single page, a workbook refers to an entire book of such sheets.

e. The simplest way of selecting a range of cells is by using the Shift and arrow keys to make a new selection. To select an entire row of cells, we press the combination of Shift + space keys. The other methods require more complex steps.

f. I will select the cell where the data has to be changed, type the changes in it, and press Enter. As I type, the data will appear in the Formula Bar and in the active cell, at the same time. I will continue to make changes in the other cells to make the necessary changes in the school timetable.

APPLICATION-BASED QUESTIONS

a. i. D5

ii. To select entire row 5 and column D:

- Select the first range of cells i.e. the row 5 by clicking on the row header.
- Hold the **CTRL** key and select another range of cell i.e. the column D by clicking on the column header.

b. i. One

ii. Sheet1

iii. To add more worksheets, click on the **New Sheet** icon.

c. i. To select multiple ranges simultaneously:

- Select the first range of cells.
- Hold the **CTRL** key and select another range of cell.

(**Note**: To select a range of cells, you can use either of the three methods: **Using the mouse**, **Using the Extension Mode**, and **Using the Go To command**)

ii. Press **CTRL + A**

IN THE LAB

1. a. To create a new workbook:
   i. Click the **FILE** tab.
   ii. In the screen that appears (called the **Backstage** view), select **New** and then click on **Blank workbook.**
   iii. A new blank workbook will appear.

   b. Type the given list along with five more countries and their national games.

   c. To save the workbook:
   i. Click the **FILE** tab.
   ii. In the menu that opens, click **Save**. The **Save As** pane appears.
   iii. To save the file on your computer, select **Computer** and then click **Browse**. The **Save As** dialog box will appear. Select the location and then type **National Games**. Click on the **Save** button. The workbook will be saved.

2. a. To create a new workbook:
   i. Click the **FILE** tab.
   ii. In the screen that appears (called the **Backstage** view), select **New** and then click on **Blank workbook.**
   iii. A new blank workbook will appear.

   b. Type the given list along with ten more countries and their currencies.

   c. To save the workbook:
   i. Click the **FILE** tab.
   ii. In the menu that opens, click **Save**. The **Save As** pane appears.
   iii. To save the file on your computer, select **Computer** and then click **Browse**. The **Save As** dialog box will appear. Select the location and then type **Currencies**. Click on the **Save** button. The workbook will be saved.

3. a. To create a new workbook:
   i. Click the **FILE** tab.
   ii. In the screen that appears (called the **Backstage** view), select **New** and then click on **Blank workbook.**
   iii. A new blank workbook will appear.

   b. Type the list, similar to the one given, for the football World Cup since 1990 along with the capital of the country.

4. a. **Using the Mouse**: To select a range of cells using the mouse,
   i. Click the cell from which the selection has to start, i.e. A1.
   ii. Now, holding the left mouse button, drag the mouse pointer to the diagonally opposite corner cell i.e. B11.

   b. **Using the Extend Selection Mode:** To select a range using the Extend Mode,
   i. Click the starting cell of the range, i.e. A1.
   ii. Press **F8** to activate the **Extend Selection** mode.
   iii. Click the last cell of the range, i.e. B11. The range of cells will be selected.

   c. **Using the Go To dialog box:** To select a range using the Go To dialog box,
   i. Click the cell at one corner of the range, i.e. A1.
   ii. Click the **HOME** tab.
   iii. In the **Editing** group, click the **Find & Select** button.
   iv. Click **Go To** or press **F5** or press **Ctrl + G**.
   v. In the cell address that appears, type the cell address of the opposite corner of the range, i.e. B11, or in the **Reference** text box or enter the range.

d. Make a list of the names of all your classmates. Make a list of all the indoor and outdoor games you play in school. Then you can create a worksheet similar to the one on page 106, listing the names of the children and showing what their favourite indoor and outdoor sports are.

GROUP PROJECT

Students will give different responses. Encourage them to research about some fiction books from the Internet or by visiting their school library. For teachers' reference, some books are listed below.

1. *The Secret Garden* by Frances Hodgson Burnett
2. *Charlie and the Chocolate Factory* by Roald Dahl
3. *The Water Horse* by Dick King-Smith
4. *Graphic Stories: Allama Iqbal* by Amina Azfar
5. *Matilda by* Roald Dahl
6. *Diary of a Wimpy Kid* by Jeff Kinney
7. *Charlotte's Web* by E. B. White
8. *The Little Prince* by Antoine de Saint-Exupery
9. *The Cat in the Hat* by Dr Seuss
10. *Graphic Stories: Abdul Sattar Edhi* by Amina Azfar

Students can write an imaginary number of copies sold for each book and record data in an Excel sheet. Sort the numbers from highest-to-lowest to show the top-ten bestsellers. The book with the highest number of sales can be highlighted and used as an advertising tool for the store.

Chapter 8 Editing Cell Contents in Excel 2013

OBJECTIVE TYPE QUESTIONS

1. a. iv. all of these b. iv. Shift cells right c. i. Ctrl
   d. ii. Insert Sheet Rows e. iv. both i. and ii

DESCRIPTIVE TYPE QUESTIONS

1. a. Copying a cell range means to duplicate a particular cell range at another location. Moving a cell range means to cut the range from the original location and paste it at another location.
   b. The method the teacher can use to correct the names of the students on her Excel Science results sheet is overwriting over the existing text. It is better to do the results sheet on computer rather than paper because it will be neater. On paper, we will have to scratch things out and write on top; that will look very untidy. Also if the entire sheet has to be written out neatly, there will be wastage of paper and time.
   c. I would choose the 'Entire Column' option because I need to add a complete column to the school newsletter.
   d. The Undo command allows us to reverse the last action we have performed whereas the Redo button undoes the last Undo action. If we make a mistake, or a series of mistakes, we can undo them; if we realise that we had not made a mistake and edited the contents, we can use the redo button.

e. The steps are listed below.
   - Press CTRL and position the cursor at the border of the selected range.
   - A small + sign appears next to the cursor.
   - Hold down the CTRL key and the left mouse button together.
   - Drag the range of cells to the desired place.
   - When you release the mouse button, the data will get copied.

These steps are to be followed carefully as listed, otherwise the drag-and-drop method will not work.

f. The options given in the drop-down boxes in the Insert and Delete dialog boxes are exactly the same. Yes, both options can be used for writing a long sentence because it will increase the cell size both ways.

APPLICATION-BASED QUESTIONS

a. i. The different ways to correct data partially are:
   - **Double-click the cell** to edit the cell contents directly in the cell.
   - **Select the cell** and press **F2** to edit the cell contents.
   - **Select the cell** and click the **Formula Bar** to edit the cell contents in the Formula bar.

   ii. Yes

b. He should add two rows before the entry of roll no. 5 to add the entries of roll numbers 3 and 4. To do so:
   i. Click the **HOME** tab. In the **Cells** group, click the drop-down menu arrow of the **Insert** button.
   ii. Select **Insert Sheet Rows.** A new row will be inserted.

c. To delete cell contents:
   i. Select the range of cells you want to delete.
   ii. Click the **HOME** tab. In the **Cells** group, click the drop-down menu arrow of the **Delete** button.
   iii. Select the **Delete Cells** option from the menu that appears.
   iv. The **Delete** dialog box is displayed. It has four options.
   v. Select the **Shift cells up** option and click **OK**.

IN THE LAB

1. a. To copy the contents of the range A1:E7 to A9:E15, do the following:
      i. Select the range A1:E7.
      ii. Click **Copy** in the **Clipboard** group on the **HOME** tab.
      iii. Click on cell A9.
      iv. Click **Paste** in the **Clipboard** group. You will find that the entire range has been pasted at the new location.

   b. Now to move the contents of the range A1:E7 to F1:L7, do the following:
      i. Select the range A1:E7.
      ii. Click **Cut** in the **Clipboard** group on the **HOME** tab.
      iii. Click on cell F1.
      iv. Click **Paste** in the **Clipboard** group. You will find that the entire range has been pasted at the new location.

2. To create a new workbook:
   i. Click the **FILE** tab.
   ii. In the screen that appears (called the **Backstage** view), select **New** and then click on **Blank workbook.**
   iii. A new blank workbook will appear.
   iv. Type the list similar to the one given.

To change the column width manually:

i. Select the columns and click the **HOME** tab.
ii. In **Cells** group, click the **Format** button.
iii. Select the **Column Width** option from the menu that appears.
iv. The **Column Width** dialog box appears. Enter a value in points and click **OK.** The width of all the selected columns will change.

3. a. To insert rows before row 4:
   i. Select the row before which new rows have to be inserted. Click the **HOME** tab. In the **Cells** group, click the drop-down menu arrow of the **Insert** button.
   ii. Select **Insert Sheet Rows.** A new row will be inserted.
   iii. Repeat the same process to add one more row. Enter the given data in the rows that have been added.

   b. To insert one column before column D:
   i. Select the column before which new column has to be inserted. Click the **HOME** tab. In the **Cells** group, click the drop-down menu arrow of the **Insert** button.
   ii. Select **Insert Sheet columns.** A new column will be inserted. Enter the data on distance in this new column. Fill the column with the distance values.

4. To create a new workbook:
   i. Click the **FILE** tab.
   ii. In the screen that appears (called the **Backstage** view), select **New** and then click on **Blank workbook.**
   iii. A new blank workbook will appear.
   iv. Type the list similar to the one given.

   a. Change the row height of the cell range A1:F11 to 20 points:
   i. Select the rows. Click the **HOME** tab.
   ii. In the **Cells** group, click the **Format** button.
   iii. Select the **Row Height…** option from the menu that appears.
   iv. The **Row Height** dialog box appears. Enter a value in points and click **OK.** The height of all the selected rows will be changed to the new value i.e. 20 points.

   b. Change the column width of the cell range A1:F11 to 15 points:
   i. Select the columns and click the **HOME** tab.
   ii. In **Cells** group, click the **Format** button.
   iii. Select the **Column Width** option from the menu that appears.
   iv. The **Column Width** dialog box appears. Enter the value 15 in points and click **OK.** The width of all the selected columns will change.

5. Ask the children to make a list of the different shapes. Tell them to look around the classroom and see what things they see in the classroom that correspond to the different shapes. Open a new worksheet. Type in a list of the different shapes in the cells. In the cells adjacent to the names, add shapes from the Insert menu. You can also add online pictures of the objects you have listed that correspond to each shape.

GROUP PROJECT

The different sports played in school are:

- Badminton
- Basketball
- Cricket
- Football
- Gymnastics

- Hockey
- Kho kho
- Swimming & Diving
- Tennis
- Track & Field
- Volleyball

Have a different worksheet for every academic month they participate in the different sports. Write how many matches are played, inter-school tournaments if any, and how the school teams fared. Summarize their achievements in sports on the basis of a review of the different worksheets and then write a short account on how the school teams fared in each sport.

Chapter 9 First Step to the Internet

OBJECTIVE TYPE QUESTIONS

1. a. i. Department of Defense of the USA b. iii. Home page c. i. Hyperlink
d. iii. ISP e. ii. hand

DESCRIPTIVE TYPE QUESTIONS

1. a. Safety tips to be followed while online are:
   - Do not give out your personal information on the Internet.
   - Do not send your picture or your personal data on the Internet to anyone without asking your parents.

   b. A cable modem is a device that helps connect the computer to a local cable TV line; a telephone modem helps connect the computer to a telephone line and a wireless modem carries the signals through the air. I think a wireless modem is most efficient because we can be anywhere and have a connection and are not reliant on being close to cable connections.

   c. A wireless network uses infrared or radio frequency signals to share information and resources between devices. Wireless media is designed to reduce the time and different type of obstacles created by cables. It does not use wires for data or voice communication. They both create an access to the Internet but one needs a cable and the other does not.

   d. The three web browsers commonly used in school and at home are Microsoft Internet Explorer, Apple Safari, and Google Chrome. We need to have access to different browsers as each one may have different features and give different information.

   e. It is important for a school website to be secure. If it is not, student information such as names and email addresses, credit card, and other transaction information can be stolen.

   f For most relevant search results, it is recommended that the keywords should be specific. Commonly-used words like 'day' might bring up a lot of irrelevant search results. However, specific keywords like Independence and Pakistan are likely to bring up more relevant search results.

APPLICATION-BASED QUESTIONS

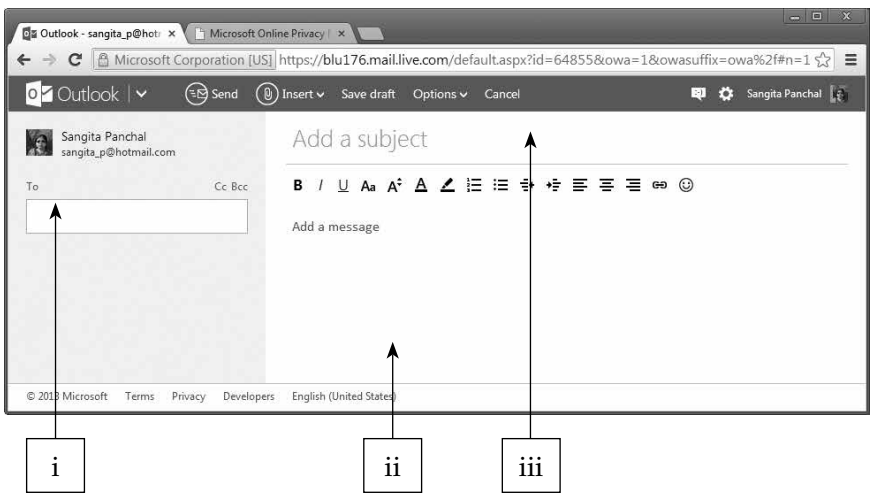
a. i. To get the relevant website address, she should search for online book stores on search engines such as Google, Yahoo or Bing.

ii. Net Surfing

b. i. To access the school website, she should connect her computer to the Internet and then enter the website address in the address bar in a web browser.

ii. She can make use of modems, dongles or make use of Wi-Fi facility by installing a wireless modem and a telephone line or satellite and an ISP.

c.



IN THE LAB

1. To search for information on the Internet, open a web browser like Google Chrome. In the web browser type the address of a search engine, for example, www.google.com. Search for the desired information here. Make sure your computer is connected to the Internet.

   To create a Word document:
   i. Click **FILE ► New ► Blank Document.**
   ii. Type the information on this page.

2. Mohid can get this information from the Internet. To search for information on the Internet, open a web browser like Google Chrome. In the web browser type the address of a search engine, for example, www.google.com. Search for the desired information here.

3. To search for information on the Internet, open a web browser like Google Chrome. In the web browser type the address of a search engine, for example, www.google.com. Search for information on tennis here. To prepare a report, create a new Word document and type the information collected from the Internet on this page.

4. To create a new presentation:
   i. Click **FILE ► New ► Blank Presentation**.
   ii. In slide 1 type the title of the presentation.
   iii. To add new slides, click the **HOME** tab and then in the **Slides** group, click **New Slide**. Select a layout of your choice. Repeat this step to create rest of the slides.

To search for information on the Internet, open a web browser like Google Chrome. In the web browser type the address of a search engine, for example, www.google.com. Search for the desired information here. The students can also create the presentation using the information given in their textbooks.

5. Demonstrate to the children how they can send an email in the computer lab. The teacher can use his/her official email address for this purpose.
   - Log in to your email account Click on Compose.
   - A new blank email window will open up.
   - In the 'To' box, type in the email address of the recipient.
   - In the subject box, mention the topic of your email.
   - Type your message in the main body field of your email.
   - Click the Send button.

A sample email is given below for the teacher's reference.

Dear Aunty Maria and Uncle Adnan,

I hope you are well. It's Mariam's birthday next month and I am really looking forward to organising a surprise party for her.

I really want her to feel like the most special person for the day. I will be giving out Invitations to all our friends in our section. Since the weather is so good, I was planning on doing it at the neighbourhood park. They have a hopscotch area there and also a basketball court. We can divide into two teams and play tournaments. Mariam is such an outdoor person. I am sure she will enjoy being outdoors with her friends.

I have made some banners. As soon as you bring Mariam at five on the pretext of meeting her basketball coach, we will surprise her from behind the entrance with banners and balloons. I am sure she will never expect a party in a park so she will be surprised.

My mother has ordered a cake for Mariam and is making sandwiches. We will also organise popcorn and juice.

Please let me know if this plan works for you. I am very excited to do this for Mariam, as she is the best friend I could ever wish for.

Thank you,

Looking forward to hearing from you,

Amal

GROUP PROJECT

Open a new PowerPoint document and create a list of the reasons why both children and adults need to be safe when they are online. Write down the benefits of using the Internet. Find images, wherever apt, so your work looks more attractive visually. To do so, you can use different colours and fonts.

Tips for the safe use of the Internet

- Do not post any personal information online such as your address, email address, or mobile number.
- Think carefully before posting pictures or videos of yourself.
- Keep your privacy settings as high as possible.
- Never give out your passwords.
- Do not meet up with people you have met online. Tell your parent/caregiver if they ask to meet you. Remember that not everyone online is who they say they are.

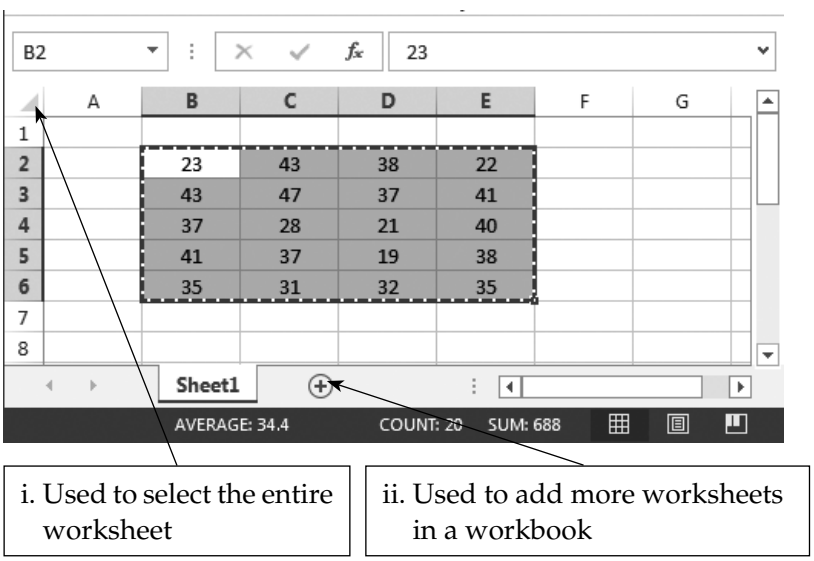
- Think carefully before posting something online. Respect other people's views.
- If you see something online that makes you feel uncomfortable, unsafe or worried, turn off your computer and tell an adult immediately.

Worksheet—3

1. Observe the worksheet below and answer the questions that follow.

a. B2: E6 b. Rows 2 to 6 and Columns B to E c. Name box d. Formula bar

e.



f. Sheet1 g. Go To command h. CTRL i. D4

j. By clicking on the column header of column D

2. Who am I?

a. Internet b. Modem c. Web browser d. Website e. Home Page

3. Find the names of any four web browsers in the grid given below.

A	S	D	R	T	W	Q	E	D	F	G	T	G	E	S	R
I	N	T	E	R	N	E	T	E	X	P	L	O	R	E	R
E	Y	R	W	E	T	Q	R	R	T	A	E	O	R	T	E
F	T	E	E	W	Y	W	T	E	Y	S	T	G	T	R	R
G	G	D	R	E	H	E	Y	T	U	D	Y	L	Y	T	T
T	H	W	T	R	J	D	J	Q	J	F	E	E	E	T	Y
H	U	S	R	T	U	S	K	W	K	F	D	C	D	Y	J
J	I	D	T	G	W	A	H	S	L	D	S	H	F	U	M
Y	O	R	G	H	A	F	G	A	O	P	E	R	A	J	D
U	P	T	H	Y	S	G	L	S	R	S	U	O	R	K	E
K	L	A	Y	J	S	D	K	R	T	A	Y	M	T	E	S
L	K	M	O	Z	I	L	L	A	F	I	R	E	F	O	X

4. Give full forms of the following.

a. World Wide Web b. Modulator Demodulator c. Internet Service Provider

Cyber Olympiad Questions

1.a.	11. d.	21. a.	31. d.
2.a.	12. d.	22. b.	32. d.
3.d.	13. a.	23. b.	33. b.
4.d.	14. c.	24. d.	34. b.
5.b.	15. c.	25. b.	35. b.
6.b.	16. a.	26. c.	36. b.
7.b.	17. c.	27. d.	37. b.
8.c.	18. c.	28. d.	38. a.
9.c.	19. b.	29. b.	39. d.
10. a.	20. a.	30. b.	40. a.

Revision Questions Answers

1. EDSAC
2. The limitations of first generation computers are given below.
   a. Their operating speed was quite slow.
   b. Their power consumption was very high.
   c. They required large space for installation.
3. Two characteristics of computers are:
   a. **Speed:** A computer can perform complex mathematical and statistical calculations at a very high speed.
   b. **Diligence:** A computer does not suffer from boredom and can work continuously as long as power is supplied to it.
4. Artificial intelligence is a branch of computer science that aims to create computers that can think, behave, and react in the same way as humans do.
5. Stylus
6. A kind of memory that retains its contents even after the power has been turned off is known as non-volatile memory.
7. ROM stands for Read Only Memory. Three types of ROM are: PROM (Programmable ROM), EPROM (Erasable and Programmable ROM), and EEPROM (Electrically Erasable and Programmable ROM).
8. Secondary memory is needed to store data for future use.

9. To insert pictures from your computer into a Word document,
   i. Place the cursor at the position where you want to insert the picture.
   ii. Click the **INSERT** tab, and click the **Pictures** button in the **Illustrations** group.
   iii. The **Insert Picture** dialog box appears.
   iv. Browse to the required folder and select the desired image and click on **Insert**.
   v. The picture will appear in the document.

10. **FORMAT** tab appears under **PICTURE TOOLS** when an image is selected.

11. Text fill effects such as Gradient fill, No fill, More fill colors, and Automatic fill can be applied to a WordArt object.

12. A circle can be drawn in Word by using the insert shape option. To insert a circle shape:
   i. Click at the position where you want to insert the shape.
   ii. Click the **INSERT** tab. Click the **Shapes** option in the **Illustrations** group and select the circle shape in the gallery that opens.
   iii. The cursor changes to a + sign. Click, hold and drag the mouse to draw the shape.

13. Header is the text that is repeated at the top margin of each page while footer is the text that is repeated at the bottom margin of each page.

14. The wrap text feature of Word automatically starts a new line when a word in a sentence reaches a border of the object around which the text is being wrapped.

15. To apply borders in a Word page:
   i. Click **Page Borders**. This will open the **Borders and Shading** dialog box with the **Page Border** tab selected.
   ii. Now chose the border of your choice and click **OK**.

16. To edit header or footer:
   i. Double-click on the header or footer. Edit the text as required.
   ii. Click **Close Header and Footer** in the ribbon or press ESC.

17. a. True b. True

18. The three looping statements in KTurtle are: **for** loop, **while** loop and **repeat**.

19. 1

20. 15 12 9 6

21.
```
learn triangle $x {
repeat 3 {
forward $x turnright 120 }}
triangle 50
```

22. To run the code of previous question for sizes 80 and 100 units respectively, replace 50 in the last command with `80` and `100` respectively, and run the program.

23. Transitions are the effects that are added when you move from one slide to the next in a presentation. Animations are the special sound and visual effects that can be added to text or objects in a slide.

24. To advance slides during a slide show, (a) click the mouse, or (b) press the spacebar, or (c) use the arrow keys.

25. To apply the same transition to all the slides, select **Apply To All** in the **Timing** group.
26. There are 1,048576 rows and 16,384 columns in an Excel 2013 worksheet.
27. To add more worksheets to a workbook, select the **New Sheet** icon (the plus sign) next to the sheet name.
28. Sheet 2
29. Two blank rows are inserted in the worksheet at the current selection and rest of the rows shift down.
30. The default row height in Excel 2013 is 15 points (for the default font Calibri of point size 11).
31. XFD
32. Format button
33. The three types of modem are: Cable modem, telephone modem, and wireless modem.
34. Net surfing is the term used for moving from one web site to another.
35. Web Address is the address or location of a web site on the Internet. For example: www.google.com is the web address of Google.
36. The email address of the recipient of the mail.
37. While using the Internet:
    a. Never give away your personal information.
    b. Do not respond to any messages that make you feel uncomfortable in any way.
38. Netiquette are the special set of manners that need to be followed while using the Internet.
39. **Google**, **Yahoo!**, and **Bing Search** are three examples of popular search engines.
40. To connect to the Internet, we require a modem, an Internet Service Provider, and data transfer medium.

WORKSHEETS

- Worksheets have been provided for all the chapters of the course book.
- Each worksheet is of 15 marks and is recommended as a formative assessment paper.
- It is possible to use these worksheets as they are by photocopying them in magnified size (120% approx.) and distributing to the students.
- The questions in the worksheets may also be used as samples to create your own additional worksheets.
- They are also available as printable documents in **digital resources.**

Chapter 1 Characteristics and Evolution of Computers

1. Who am I? **(5)**

Identify what is being talked about from the hints given.

a. I am the first calculating device.

b. I am the first mechanical calculator.

c. I am a type of tube used in first-generation computers.

d. I am the world's first fully automatic calculator.

e. I was first used in 3rd generation computers.

2. Jumbled Words **(4)**

Unjumble the letters to form words using the hints given.

a. Loboc

Hint – A programming language

b. Procmicorrossec

Hint – A type of large-scale integrated circuit

c. Sistorsnart

Hint – Essential feature of second generation computers

d. Yarc

Hint – A type of supercomputer

3. Give three facts about the following: **(3 × 2 = 6)**

a. Features of first generation computers

b. Features of fifth generation computers

Chapter 2 Data Devices

1. Who am I? **(5)**

Identify what is being talked about from the hints given.

a. I am similar to a TV screen.

b. I am a computer display screen that recognizes the touch input.

c. I am a type of printer that produces the desired character on a drum.

d. I am the storage capacity of a computer.

e. I am the result given by the computer.

2. Jumbled Words **(5)**

Unjumble the letters to form words using the hints given.

a. Atad

Hint: Facts and figures that we want the computer to work on

b. Tesby

Hint : Collection of Bits

c. Tilealov

Hint : Type of memory which is erased when power goes off

d. Aryliixua

Hint : Secondary or external memory

e. Popyfl

Hint : A storage device made up of a magnetic disk in a plastic case

3. Word Search **(5)**

Search for the words related to memory of a computer in the grid given below:

J	O	Y	R	A	M	C	K	S
W	X	N	T	D	T	Y	R	P
Z	E	T	U	E	V	W	X	P
C	E	A	L	P	Q	R	S	R
W	P	B	C	R	M	I	O	O
B	R	R	M	O	U	S	E	M
J	O	T	E	M	M	A	R	E
P	M	O	J	E	C	T	E	R
K	L	E	R	O	M	K	Q	W

Chapter 3 Objects in Word 2013

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am a text styling feature in Word 2013.

b. I am a box object used to write letters and numbers.

c. I am a visual image that can be inserted from the Internet.

d. I am the process of removing an unwanted part of the image.

e. I am the group where image corrections can be made.

2. Jumbled Words **(5)**

Unjumble the letters to form words using the hints given.

a. Sedgui

Hint : Green horizontal and vertical lines that appear when you move an image

b. Sopition

Hint : This command helps you place your image or text box at a particular place on the page.

c. Tamfor

Hint : This tab contains options for changing the appearance of WordArt text.

d. Ginb

Hint : This image search is used to search the Internet for images.

e. Stratilluions

Hint : This group of the **INSERT** tab contains the Shapes option.

3. Word Search **(5)**

Search for different text-effect options in the grid given below:

R	E	F	L	E	C	T	I	O	N
W	X	N	T	D	T	Y	R	P	Z
X	S	T	U	S	V	W	X	P	B
P	G	L	O	W	Q	R	S	A	E
L	E	S	C	R	E	E	N	N	V
O	E	F	O	L	D	E	R	E	E
S	H	A	D	O	W	A	R	E	L
R	B	M	U	A	D	U	L	A	Q
E	T	R	A	N	S	F	O	R	M
R	L	W	I	N	D	O	W	S	F

Chapter 4 Advanced Features of Word 2013

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am the text that is printed at the bottom of each page.

b. I am the default distance between the top of the page and the header.

c. I am the text, comment or explanation appearing at the end of the document.

d. I am the keyboard shortcut for inserting footnotes.

e. I am the text or picture placed behind the document text.

2. Jumbled Words **(5)**

Unjumble the letters to form words using the hints given.

a. Otofteno

Hint: Note at the bottom of the page

b. Ferenreces

Hint: This tab contains the footnotes group.

c. Lobyms

Hint: Special character used instead of a numerical or alphabetical note reference

d. Signed

Hint: Page background is found in this tab.

e. Redahe

Hint: Text which is printed at the top of each page

3. Word Search **(5)**

Search for the words representing the tabs in Word 2013 in the grid given below.

E	C	A	Y	F	A	I	N	T	S
X	R	C	T	I	S	V	W	X	L
P	E	V	A	L	P	Q	R	S	I
L	A	D	S	E	R	E	E	N	D
W	X	N	N	T	D	T	Y	R	P
S	T	M	D	E	S	I	G	N	E
Q	H	S	S	W	E	R	P	N	M
R	O	N	I	I	N	S	E	R	T
E	M	U	N	I	T	O	R	E	R
P	E	P	C	T	U	V	I	E	W

Chapter 5 KTurtle Loops and Learns!

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am a sentence which explains the logic of a program, in a program.

b. I am the operator which checks if two values are same.

c. I have only two values—true or false.

d. I am a set of statements that continues to execute till a condition is true.

e. I am also called as counting loop.

2. Word Search **(4)**

Search for different KTurtle commands in the grid given below.

E	C	Y	F	A	I	N	T	S
V	R	E	P	E	A	T	X	L
I	E	A	L	P	Q	R	S	I
T	A	S	W	H	I	L	E	D
S	H	D	E	S	I	G	N	E
R	L	E	A	R	N	E	R	T
W	X	N	T	D	T	Y	R	P
E	M	B	R	E	A	K	E	R
P	E	C	T	U	V	I	E	W

3. Give three facts about the following: **(3 × 2 = 6)**

a. Looping Commands

b. Comparison operators

Chapter 6 Making Presentations Interesting

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am the set of colors, fonts and special effects that you can use for a presentation.
b. I am a page in a presentation.
c. I am a special sound or a visual effect on a slide.
d. I am the special effect that appears when you move from one slide to the next.
e. I am a set of graphics.

2. Jumbled Words **(5)**

Unjumble the letters to form words using the hints given.

a. Restin
   Hint: Tab which contains command groups for placing pictures and charts in a presentation
b. Nedgis
   Hint: This tab contains the format background option.
c. Alernoitphis
   Hint: This is a SmartArt graphics category.
d. Trees
   Hint: The option used to go back to the original SmartArt if you do not like the design changes.
e. Lumevo
   Hint : Playback tab option which adjusts the sound

3. Word Search **(5)**

Search for different SmartArt options in the grid given below.

P	Y	R	A	M	I	D	T	M
X	R	E	P	E	A	T	X	A
P	R	O	C	E	S	S	S	T
T	A	S	W	H	I	L	E	R
S	H	L	I	S	T	G	N	I
R	L	E	A	R	N	E	R	X
E	M	B	R	E	A	K	E	R
P	E	C	Y	C	L	E	E	W

Chapter 7 Starting Excel 2013

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am a useful spreadsheet program.

b. I am a page containing a grid in Excel.

c. I am the bar located at the top of the Excel window.

d. I contain commands to perform formatting and sorting.

e. I am a collection of worksheets.

2. Give three facts about the following. **(3 × 2 = 6)**

a. Data Types

b. Worksheet View options

3. Word Search **(4)**

Search for the different tabs present in the Excel 2013 window in the grid given below.

F	H	E	S	A	U	R	U	I
O	A	F	I	L	E	W	X	N
R	L	A	Y	O	U	T	S	S
M	V	S	C	O	L	O	R	E
U	E	V	D	A	T	A	E	R
L	S	I	L	E	M	A	R	T
A	E	R	T	I	C	A	L	M
S	P	H	O	M	E	N	G	E

Chapter 8 Editing Cell Contents in Excel 2013

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am the intersection between a row and column.

b. I am the process of replacing the contents of a cell completely.

c. I am the group containing the Copy option.

d. I am the command that allows you to reverse the last action.

e. I am the keyboard shortcut to redo an action.

2. Jumbled Words. **(4)**

Unjumble the letters to form words using the hints given.

a. Letede

Hint : Key used to remove cell contents

b. Etingdi

Hint : I am the group in the **HOME** tab where the Clear button is found.

c. Etpas

Hint : Option used to move data from one place to another

d. Mortaf

Hint : This menu has the option to change the row height.

3. Give three facts about the following. **(3 × 2 = 6)**

a. Partial modification of Data

b. Options in the Insert dialog box

Chapter 9 First Step to the Internet

1. Who am I? **(5)**

Identify what is being talked about from the hint given.

a. I am a huge network of computers around the world.

b. I am the first computer network in the world which formed the basis of the Internet.

c. I am a message sent via Internet.

d. I am the process of buying and selling things on the Internet.

e. I am a device that allows a computer to connect and communicate with other computers.

2. Jumbled Words **(4)**

Unjumble the letters to form words using the hints given.

a. Roadbanbd

Hint : Type of Internet access connection

b. Lesseriw

Hint : A type of modem

c. bomliikn

Hint : A popular ISP in Pakistan

d. Glenod

Hint: A device used for mobile Internet

3. Give three facts about the following. **(3 × 2 = 6)**

a. Modem

b. Types of broadband technology

Worksheet Answers

Chapter 1 Characteristics and Evolution of Computers

1. a. Abacus b. Pascaline c. vacuum
   d. Mark 1 e. chips/ICs
2. a. Cobol b. Microprocessor c. Transistors d. Cray
3. a. Features of first generation computers:
   i. Used vacuum tubes
   ii. Difficult to program
   iii. High Power consumption
   b. Features of fifth generation computers:
   i. Use artificial intelligence
   ii. Very high speed and storage capacity
   iii. Ability to carry out sophisticated operations

Chapter 2 Data Devices

1. a. VDU/Monitor b. Touch screen c. Laser d. Memory e. output
2. a. Data b. Bytes c. Volatile d. Auxiliary e. Floppy
3.

J	O	Y	R	A	M	C	K	S
W	X	N	T	D	T	Y	R	P
Z	E	T	U	E	V	W	X	P
C	E	A	L	P	Q	R	S	R
W	P	B	C	R	M	I	O	O
B	R	R	M	O	U	S	E	M
J	O	T	E	M	M	A	R	E
P	M	O	J	E	C	T	E	R
K	L	E	R	O	M	K	Q	W

Chapter 3 Objects in Word 2013

1. a. WordArt b. Text/TextBox c. Pictures d. Cropping e. Adjust
2. a. Guides b. Position c. Format d. Bing e. Illustrations
3.

R	E	F	L	E	C	T	I	O	N
W	X	V	T	D	T	Y	R	P	Z
X	S	T	U	S	V	W	X	P	B
P	G	L	O	W	Q	R	S	A	E
L	E	S	C	R	E	E	N	N	V
O	E	F	O	L	D	E	R	E	E
S	H	A	D	O	W	A	R	E	L
R	B	M	U	A	D	U	L	A	Q
E	T	R	A	N	S	F	O	R	M
R	L	W	I	N	D	O	W	S	F

Chapter 4 Advanced Features of Word 2013

1. a. Footer b. 0.5 inches c. Endnote
   d. Ctrl + Alt + F e. Watermark
2. a. Footnote b. References c. Symbol d. Design e. Header
3.

E	C	A	Y	F	A	I	N	T	S
X	R	C	T	I	S	V	W	X	L
P	E	V	A	L	P	Q	R	S	I
L	A	D	S	E	R	E	E	N	D
W	X	N	N	T	D	T	Y	R	P
S	T	M	D	E	S	I	G	N	E
Q	H	S	S	W	E	R	P	N	M
R	O	N	I	I	N	S	E	R	T
E	M	U	N	I	T	O	R	E	R
P	E	P	C	T	U	V	I	E	W

Chapter 5 KTurtle Loops and Learns!

1. a. Comment b. equals or == c. Boolean d. loop e. for

2.

E	C	Y	F	A	I	N	T	S
V	R	E	P	E	A	T	X	L
I	E	A	L	P	Q	R	S	I
T	A	S	W	H	I	L	E	D
S	H	D	E	S	I	G	N	E
R	L	E	A	R	N	E	R	T
W	X	N	T	D	T	Y	R	P
E	M	B	R	E	A	K	E	R
P	E	C	T	U	V	I	E	W

3. a. Looping Commands

   i. The `repeat` looping command repeats (loops) the code between the brackets for as many times as the given number.

   ii. The `while` loop keeps repeating the code between brackets until the Boolean evaluates to false.

   iii. The `for` is a counting loop. After every loop the counter is increased by 1 by default.

   b. Comparison operators

   i. There are six comparison operators.

   ii. The comparison operators are ==, !=, >, <, >=, and <=.

   iii. The comparison operators can be used to compare numbers or variables that contain numbers.

Chapter 6 Making Presentations Interesting

1. a. Theme b. slide c. Animation d. Transition e. SmartArt

2. a. Insert b. Design c. Relationship d. Reset e. Volume

3.

P	Y	R	A	M	I	D	T	M
X	R	E	P	E	A	T	X	A
P	R	O	C	E	S	S	S	T
T	A	S	W	H	I	L	E	R
S	H	L	I	S	T	G	N	I
R	L	E	A	R	N	E	R	X
E	M	B	R	E	A	K	E	R
P	E	C	Y	C	L	E	E	W

Chapter 7 Starting Excel 2013

1. a. Excel b. Worksheet c. Title d. Ribbon e. Workbook

2. a. Data Types

   i. There are three data types in excel: text, numbers, and formulae.
   ii. Text data type is used to input text.
   iii. Number data type is used to input numbers.

   b. Worksheet View options

   i. Normal View shows all rows and columns in a worksheet.
   ii. Page Layout View divides the worksheet into pages.
   iii. Page Break View gives you an overview of a worksheet with page breaks, and tells you how many printed pages would be required to hold all the data in the worksheet.

3.

F	H	E	S	A	U	R	U	I
O	A	F	I	L	E	W	X	N
R	L	A	Y	O	U	T	S	S
M	V	S	C	O	L	O	R	E
U	E	V	D	A	T	A	E	R
L	S	I	L	E	M	A	R	T
A	E	R	T	I	C	A	L	M
S	P	H	O	M	E	N	G	E

Chapter 8 Editing Cell Contents in Excel 2013

1. a. Cell b. Overwriting c. Clipboard d. Undo e. Ctrl+Y

2. a. Delete b. Editing c. Paste d. Format

3. a. Partial modification of Data

   i. Double click the cell to directly edit content in the cell.
   ii. Select the cell and Press F2 to edit the cell contents directly in the cell.
   iii. Select the cell and click the Formula Bar to edit the cell contents in the Formula Bar.

   b. Options in the Insert dialog box (any 3 of the 4 options listed below)

   i. Shift cells right: Blank cells are filled in the selected range and the existing cells are shifted to the right.
   ii. Shift cells down: Blank cells are filled in the selected range and the existing cells are shifted down.
   iii. Entire Rows: Rows that pass through the selected range are shifted down and new row is inserted.
   iv. Entire Column: Columns that passes through the selected range are shifted to the right and new column is inserted.

Chapter 9 First Step to the Internet

1. a. Internet b. ARPANET c. email d. e-commerce e. modem
2. a. Broadband b. Wireless c. Mobilink d. Dongle
3. a. Modem
   i. Modem stands for modulator-demodulator.
   ii. A cable modem is a device that helps you connect your computer to a local cable TV line.
   iii. A wireless modem carries data through the air instead of a cable.
   b. Types of broadband technology
   i. Wireless mobile broadband is a high-speed Internet service via wireless technology, usually meant for use while you are away from your house or office.
   ii. Wired Broadband is a high-speed Internet service via wired technology.
   iii. Wireless broadband is a high-speed Internet service via wireless technology.

TEST PAPERS

- Test papers have been provided for all the chapters of the course book.
- Each test paper is of **20 marks** and has both theory (**15**) and practical (**5**) components.
- The test papers may be used for pen and paper assessment or the questions in them could be used to create your own assessment papers.
- They are also available as printable documents in **digital resources.**

Chapter 1 Characteristics and Evolution of Computers

1. Fill in the blanks with the correct words. **(5)**

a. The ..... was probably the first calculating device.

b. The present-day computers use ..... .

c. Charles Babbage invented a machine called the ..... to prepare mathematical tables.

d. The ..... was the first electronic computer that used stored programs.

e. ..... is computing that involves artificial intelligence.

2. Write T for the true statement and F for the false one. **(5)**

a. The first generation computers used vacuum tubes. .....

b. Mark I was the first fully electronic digital computer. .....

c. Napier's bones was a calculating device that had numbers carved on steel. .....

d. Pascaline was invented by Blaise Pascal. .....

e. A computer can work with different types of data like pictures, audio, and video. .....

3. Very Short Answer Questions. **(2)**

a. Who is called the father of modern computers?

b. Which device was used in the second-generation computers?

4. Short Answer Questions. **(8)**

a. What are the fifth-generation computers referred to and why?

b. What did the third-generation computers use? Give an example of the third-generation computer.

c. List any two limitations of the first-generation computers.

d. What do you mean by the property of diligence in a computer system?

Chapter 2 Data Devices

1. Fill in the blanks with the correct words. **(5)**

a. The devices through which data and instructions are fed into a computer are called ..... .

b. A ..... is a special pen used in graphics tablet that is used to draw images by hand.

c. An ..... , a machine used for getting money at any time, uses a touch screen.

d. A printer is an example of an ..... .

e. A ..... is a binary digit, either 0 or 1.

2. Write T for the true statement and F for the false one. **(5)**

a. The full form of RAM is 'Random Access Memory'. .....

b. The printed output that a printer provides is called the soft copy. .....

c. A byte is made up of 8 bits. .....

d. The primary memory can be directly accessed by the CPU. .....

e. A DVD stores more data than a blue ray disc. .....

3. Very Short Answer Questions. **(4)**

a. What do you call the devices that are used to get the output from a computer?

b. What is the storage capacity of a computer called?

c. Give any 2 examples of the secondary storage devices.

d. Which type of memory is used to store the programs and data for future referencing?

4. Short Answer Questions. **(6)**

a. What is the difference between volatile and non-volatile memory?

b. What are the two main types of printers? Give an example of each.

c. What is a touch screen? Name some places where touch screens are used.

Chapter 3 Objects in Word 2013

1. Fill in the blanks with the correct words. **(5)**

a. The shape and formatting characteristics of a WordArt object are called ..... .

b. The ..... group on the **INSERT** tab has options to insert a text box in the Word document.

c. ..... means removing an unwanted part of an image.

d. The ..... command helps place the image or text box at a particular position on the page.

e. Click the ..... tab in order to get options for formatting a text box.

2. Write T for the true statement and F for the false one. **(5)**

a. You can convert the text that has already been typed in, to WordArt text. .....

b. You can insert pictures in a document only from your computer. .....

c. The appearance of a picture cannot be changed once it has been inserted in a document. .....

d. A variety of shapes like stars, callouts, etc. can be inserted in the document. .....

e. The **INSERT** tab has options for cropping a picture. .....

3. Very Short Answer Questions. **(5)**

a. Which feature in Word starts a new line when a word in a sentence reaches a border?

b. Which group on the **FORMAT** tab has the button for changing the shape of the text?

c. Which option in Word 2013 can be used to search the Internet for images?

d. Which command in the **Adjust** group can be used to sharpen or soften an image?

e. What do you call the green horizontal and vertical lines that appear when an image is moved?

4. Lab Exercise. **(5)**

Arham has to design a poster saying 'Welcome to the Party' in order to welcome guests arriving at his birthday party. Can you help him do the task?

Chapter 4 Advanced Features of Word 2013

1. Fill in the blanks with the correct words. **(5)**

a. A ..... is a piece of text that is printed at the bottom of each page in a document.

b. The option to insert a header is present in the **Header & Footer** group on the ..... tab.

c. A ..... is a text or picture placed behind the document text.

d. The option to add watermark is present on the ..... tab.

e. A ..... is typically used for giving more details about an item in your text.

2. Write T for the true statement and F for the false one. **(5)**

a. By default, headers are printed 1.5 inches from the top of the page. .....

b. A footnote or an endnote consists of two linked parts. .....

c. A footnote appears at the top of the page. .....

d. You cannot insert a date in the header. .....

e. The **Page Border** option is available on the **DESIGN** tab. .....

3. Very Short Answer Questions. **(5)**

a. In which view can you see the headers and footers?

b. Name the tab that has the option to apply border to a page.

c. Name the two parts that a footnote is made up of.

d. Which check box is to be checked to select a different header or footer for the first page?

e. What is the keyboard shortcut for inserting an endnote in a page?

4. Lab Exercqise. **(5)**

Falak has to create a document in Word having the text given below.

Her teacher has asked her to add the word "Fruits" in the header and create two footnotes for the words "Kasur" and "Larkana" to tell which provinces they belong to.

Can you help her do the task?

Text:

Fruits are delicious and nutritious. They grow on plants and trees in the gardens. Fruits like mangoes, jackfruits, leeches, apples, pomegranates, oranges, grapes, papaya, guavas, etc. are some of the common fruits found in Pakistan. They are available in different seasons of the year.

These fruits are known to be extremely nutritious.

Chapter 5 KTurtle Loops and Learns!

1. Fill in the blanks with the correct words. **(5)**

a. A program consists of ..... that are executed when the program is run.

b. ..... are sentences that explain the logic for using a certain command.

c. The ..... command finishes the execution of the KTurtle program.

d. The ..... command helps you create your own set of commands with a name to it.

e. ..... is the value by which the computer increases the value of a variable.

2. Write T for the true statement and F for the false one. **(5)**

a. The `while` command executes only once. .....

b. The `else` statement is used when you want an output when the Boolean value is false. .....

c. A comment line starts with the star symbol. .....

d. The `repeat` command is a looping command. .....

e. The result of a comparison operation is either true or false. .....

3. Very Short Answer Questions. **(5)**

a. Which values are known as Boolean values?

b. What do you call the set of statements that continue to execute, till a condition is true?

c. What is the other name given to the `for` loop?

d. Name the command used to stop the current loop and transfer control to the statement following the loop?

e. In case of `for` loop, by what default value is the number increased after every loop?

4. Lab Exercise. **(5)**

Hina has been given a task by her teacher to create a square in KTurtle using `learn` and `repeat` commands. Can you help her do the task?

Chapter 6 Making Presentations Interesting

1. Fill in the blanks with the correct words. **(5)**

a. In PowerPoint, pictures, shapes, SmartArt, screenshots etc. are collectively called ..... .

b. A ..... in a presentation can be thought of as one page of a booklet.

c. ..... are special effects that appear when you move from one slide to the next.

d. A ..... is an image or a picture of the display on your screen.

e. The ..... group on the **DESIGN** tab has the option to revert the design changes made to the SmartArt.

2. Write T for the true statement and F for the false one. **(5)**

a. The **INSERT** tab has all the command groups for inserting various objects. .....

b. In PowerPoint, it is not possible to insert songs, voice recordings, movie clips etc. in the presentation. .....

c. The **Images** group on the **INSERT** tab has the option to insert a photo album. .....

d. The outline view is the main editing view that you use to create and design a presentation. .....

e. A slide show can be stopped by pressing the ESC key. .....

3. Very Short Answer Questions. **(5)**

a. What are the special sound or visual effects on a slide called?

b. What is the name given to the set of graphics that helps you create different kinds of lists, process diagrams, or a hierarchy?

c. Name the two additional tabs that appear on the ribbon when a SmartArt is added to a presentation?

d. Which group on the **INSERT** tab has options to add video to a presentation?

e. Name the view that is used to see all slides of the presentation in miniature form on the screen.

4. Lab Exercise. **(5)**

The sports teacher has given an assignment to the students of Class V to make a presentation on the topic 'History of Olympics' consisting of six slides. Ali wants to make it interesting by inserting sound and movie files, and by using transition and animation effects. Can you help him do this?

Chapter 7 Starting Excel 2013

1. Fill in the blanks with the correct words. **(5)**

a. The last column of an Excel sheet is labelled as ..... .

b. A ..... is the smallest unit of a worksheet formed by the intersection of a row and a column.

c. Range is a rectangular block of ..... cells.

d. The ..... is present to the left of the Formula Bar and it displays the address of the selected cell.

e. A ..... is a page containing a grid of cells made up of rows and columns.

2. Write T for the true statement and F for the false one. **(5)**

a. The *fx* button in Excel 2013 is called the **Insert Feature** button. .....

b. A workbook can contain a maximum of 256 worksheets. .....

c. A workbook in Excel 2013 by default shows only one worksheet and its tab is by default named Sheet1. .....

d. The number to the right of the **Zoom Control** slider reflects the zoom percentage. .....

e. The **Status Bar** is present at the top of the Excel window. .....

3. Very Short Answer Questions. **(5)**

a. What is a workbook in Excel 2013?

b. How are rows numbered in Excel 2013?

c. What are the three types of data that can be entered in an Excel worksheet?

d. What is meant by Cell Pointer?

e. What will be the address of the cell formed by the combination of row 6 and column F?

4. Lab Exercise. **(5)**

Bilal's Geography teacher has asked him to prepare a list of 10 countries in Asia, their respective capitals and currencies. This list needs to be prepared using Excel. Can you help him perform this exercise?

Chapter 8 Editing Cell Contents in Excel 2013

1. Fill in the blanks with the correct words. **(5)**

a. The **Delete Sheet Rows** option appears in the drop-down menu arrow of the **Delete** button in the ..... group of the **HOME** tab.

b. The **Row Height** option is available in the menu that appears on clicking the ..... button in the **Cells** group.

c. To delete cell contents, user can select the cell, right-click and select ..... from the context menu.

d. The **Copy** command is available in the ..... group of the **HOME** tab.

e. Ctrl + X is the keyboard shortcut for the ..... command.

2. Write T for the true statement and F for the false one. **(5)**

a. Excel automatically adjusts row height to accommodate the tallest font in the row. .....

b. The **Redo** button always remains active in the **Quick Access Toolbar**. .....

c. When a range of cells is selected to be moved using the **Cut** command, the selected cells are surrounded by a solid black line. .....

d. As the mouse pointer is moved over each option of the Paste command, the user can see a live preview of what the pasted data would look like. .....

e. To modify a cell's content partially the user can select the cell and press F1 to edit the cell contents directly in the cell. .....

3. Very Short Answer Questions. **(5)**

a. What is meant by Row Headings?

b. What are the two ways in which cell contents can be edited?

c. What happens when the **Shift cells right** option is chosen from the **Insert** dialog box?

d. How is it possible to undo several actions at once?

e. How is it possible to move data by the drag-and-drop method?

4. Lab Exercise. **(5)**

Sidra has been asked to make a list of students of her music class in an alphabetical order (by first name). The list must contain the following fields:

- Student Code
- Student Name
- Date of Joining

After Sidra had finished the first list, 3 new students joined the class and their names had to be inserted in the list. The first list is as given below.

	A	B	C
1.	Student Code	Student Name	Date of Joining
2.	5001	Dawood Imam	2 Jan 2014
3.	5006	Ghazala Javed	5 Jan 2014
4.	5003	Jawad Khan	5 Jan 2014
5.	5004	Kiran Ahmed	10 Jan 2014
6.	5009	Palwarsha Ali	12 Jan 2014
7.	5002	Anam Ansari	2 Jan 2014
8.	5005	Rabia Hasan	5 Jan 2014
9.	5007	Rahail Shahid	2 Jan 2014
10.	5008	Sumair Ali	10 Jan 2014
11.	5010	Asad Ahmed	12 Jan 2014

The names of the three new students who joined on 27 Jan 2014 are:

1. Amaan Anwar
2. Rabab Khawar
3. Abrar Noor

Can you help Sidra by enlisting the steps to insert these names retaining the alphabetical order?

Chapter 9 First Step to the Internet

1. Fill in the blanks with the correct words. **(5)**

a. A special set of manners that need to be followed while using the Internet is called ..... .

b. The link connecting one web page to another is known as a ..... .

c. A ..... modem transmits (carries) the data signals through the air instead of a cable.

d. Moving from one website to another is called ..... .

e. www.outlook.com is an example of a website that provides ..... service.

2. Write T for the true statement and F for the false one. **(5)**

a. ARPANET stands for Advanced Research Programs Allied Network. .....

b. When the mouse pointer moves over a hyperlinked text or image, the pointer changes from an arrow to a pen symbol. .....

c. In comparison to an email, a letter or a courier would require both more time and money. .....

d. http://www.aol.com is an example of a search engine. .....

e. To visit a website, the user needs to type the address of the website in the address bar and then press the CTRL key. .....

3. Very Short Answer Questions. **(6)**

a. What are the two types of Internet access connections?

b. What is the unit to measure the speed of a modem?

c. What is a dongle?

d. What is meant by a home page?

e. What is meant by a website?

f. What does the "s" in "https://" stand for?

4. Short Answer Questions. **(4)**

a. Define a modem and name the three types of modems.

b. Explain what a web browser is and give two examples of web browsers.

Test Paper Answers

Chapter 1 Characteristics and Evolution of Computers

1. a. Abacus b. Microprocessors c. Difference engine
   d. EDSAC e. Expert system

2. a. T b. F c. F d. T e. T

3. a. Charles Babbage is called the father of modern computers.
   b. The second generation computers used transistors.

4. a. The fifth-generation computers are referred to as supercomputers as they have very high storage capacities, high speeds, and the ability to carry out highly sophisticated operations.

   b. The third-generation computers used Integrated Circuits (ICs) for the first time. An example of third generation computer is the IBM 360 series.

   c. Two limitations of the first generation computers were:
      i. their operating speed was quite slow.
      ii. their power consumption was very high.

   d. Diligence means the ability of a computer system to work with the same accuracy till power is supplied to it, without any boredom.

Chapter 2 Data Devices

1. a. Input devices b. Stylus c. ATM d. Output device e. Bit

2. a. T b. F c. T d. T e. F

3. a. The devices that are used to get the output from a computer are called output devices.
   b. The storage capacity of a computer is called its memory.
   c. Two examples of secondary storage devices are: floppy disk and hard disk.
   d. Secondary memory is used to store the programs and data for future referencing.

4. a. The kind of memory that loses its contents when the power is turned off is known as volatile memory; whereas the kind of memory that retains its contents even when the power is turned off is known as non-volatile memory.

   b. The two main types of printers are: impact printers, for example, the dot matrix printer; and non-impact printers, for example, the inkjet printer.

   c. A touch screen is a computer display screen in which a user interacts with the computer by touching words or pictures on the screen. Touch screens are used in Automated Teller Machines (ATMs), in tablet PCs, in railway and airport terminals, in hospitals, etc.

Chapter 3 Objects in Word 2013

1. a. WordArt styles b. Text c. Cropping d. Position e. Format
2. a. T b. F c. F d. T e. F
3. a. The Wrap Text feature starts a new line when a word in a sentence reaches a border.
   b. The **WordArt Styles** group on the **FORMAT** tab has the button for changing the shape of the text.
   c. The **Bing Image search** option can be used to search the Internet for images.
   d. The **Corrections** command in the **Adjust** group can be used to sharpen or soften an image.
   e. The green horizontal and vertical lines that appear when an image is moved, are called Alignment guides.
4. a. Start Word 2013 and create a new document. Type the text "Welcome to the Party".
   b. Change the text into WordArt by doing the following:
      i. Select the text "Welcome to the Party".
      ii. Click the **INSERT** tab, and in the **Text** group, click WordArt and select the WordArt style you want to use.
   c. To change the shape of the text, select the text and do the following:
      i. Click the **FORMAT** tab.
      ii. In the **WordArt Styles** group, click the **Text Effects** option. Select **Transform** and choose any effect that you want.
   d. To change the fill color, click the drop-down menu arrow of the **Text Fill** option in the **WordArt Styles** group and select the desired color.
   e. To apply visual effects, click the **Text Effects** option in the **WordArt Styles** group and select the desired effect.

Chapter 4 Advanced Features of Word 2013

1. a. Footer b. Insert c. Watermark d. Design e. Footnote
2. a. F b. T c. F d. F e. T
3. a. You can see the headers and footers in the Print Layout view.
   b. The **DESIGN** tab has the option to apply border to a page.
   c. A footnote consists of two linked parts: a note reference mark and the corresponding note text.
   d. The check box for **Different First Page** option is to be checked to select a different header or footer for the first page.
   e. The keyboard shortcut for inserting an endnote is Ctrl + Alt +D.
4. a. Start Word 2013 and create a new document. Type the text as given.
   b. To add "Fruits" as the header:
      i. Click the **INSERT** tab.
      ii. In the **Header & Footer** group, click Header.
      iii. The Header gallery with various header designs is displayed. Click on Blank or scroll through the gallery and choose the style you want.

iv. The **DESIGN** tab under **HEADER & FOOTER TOOLS** will now be displayed. Type the word "Fruits" in the header area.

v. Press ESC.

c. To insert the first footnote:

i. Position the cursor after the word "Kasur".

ii. Click the **REFERENCES** tab.

iii. Click **Insert Footnote** in the **Footnotes** group.

iv. Type the text "Kasur is a district in the province of Punjab in Pakistan" for the footnote in the footnote area.

d. To insert the second footnote:

i. Position the cursor after the word "Larkana".

ii. Click the **REFERENCES** tab.

iii. Click **Insert Footnote** in the **Footnotes** group.

iv. Type the text "Larkana is located in the province of Sindh" for the footnote in the footnote area.

Chapter 5 KTurtle Loops and Learns!

1. a. Instructions b. Comments c. exit d. learn e. step

2. a. F b. T c. F d. T e. T

3. a. The values "True" and "False" are called Boolean values.

b. A **loop** is the set of statements that continue to execute, till a condition is true.

c. The `for` loop is also called **counting** loop.

d. The `Break` command is used to stop the current loop and transfer control to the statement following the loop.

e. In case of `for` loop, the number is increased by 1 after every loop.

4. KTurtle program to create a square by using the `learn` and `repeat` commands:

```
reset
learn square $s {
repeat 4 {fw $s tr 90 }}
penwidth 10
square 150
```

Chapter 6 Making Presentations Interesting

1. a. Objects b. Slide c. Transitions d. Screenshot e. Reset

2. a. T b. F c. T d. F e. T

3. a. The special sound or visual effects on a slide are called animations.

b. The set of graphics that helps you create different kinds of lists, process diagrams, or a hierarchy is called SmartArt graphics.

c. The two additional tabs that appear on the ribbon when a SmartArt is added to a presentation are: **DESIGN** and **FORMAT**.
d. The **Media** group on the **INSERT** tab has options to add video to a presentation.
e. The Slide Sorter view is used to see all slides of the presentation in miniature form on the screen.

4. a. Click **FILE ► New ► Blank Presentation**.
   b. In slide 1, type the title of the presentation. Insert slide 2 to 6. Select the required layouts for inserting text and pictures if needed.
   c. Download text, pictures, a sound file, and a movie file from the Internet or any other source for the presentation.
   d. To insert pictures in your slides, click on **Pictures** in the **Images** group and insert required pictures.
   e. Click on **Audio** in the **Media** group on the **INSERT** tab and insert your sound or audio file in the desired slide or slides.
   f. Select the sound icon, and click the **PLAYBACK** tab under **AUDIO TOOLS**.
   g. In the **Audio Options** group, click the drop-down menu arrow of the **Start** box and select **Automatically**.
   h. Add animations to all the slides as follows:
      i. Select the text or picture.
      ii. Click the **ANIMATIONS** tab. In the **Animation** group, click the **Appear** option.
   i. To add a transition effect between slides:
      i. Select any slide.
      ii. Click the **TRANSITIONS** tab. Under **Transition to This Slide** group, click the **Push** transition scheme.
      iii. In the Timing group, do the following:
         - Set the **Duration**.
         - Select **On Mouse Click** under **Advance Slide**.
         - Click **Apply To All**.
   j. Save the presentation as "History of Olympics".

Chapter 7 Starting Excel 2013

1. a. XFD b. Cell c. contiguous d. Name Box e. Worksheet
2. a. F b. F c. T d. T e. F
3. a. In Excel 2013, a workbook is a collection of worksheets.
   b. Rows are numbered from top to bottom along the left edge as 1, 2 and so on.
   c. The three types of data that can be entered in an Excel worksheet are: Numbers, Text, and Formulae.
   d. Cell Pointer is a highlighted cell boundary that specifies which cell is active at that moment.
   e. The address of the cell formed by the combination of row 6 and column F will be F6.

4. a. Select **Start ► All Programs ► Microsoft Office 2013 ► Excel 2013**.
   b. First type the headings. Type "Country" in A1, "Capital" in B1, "Currency" in C1.

	A	B	C
1	Country	Capital	Currency
2	Afghanistan	Kabul	Afghani
3	Bangladesh	Dhaka	Taka
4	China	Beijing	Renminbi (Yuan)
5	India	New Delhi	Indian Rupee
6	Indonesia	Jakarta	Rupiah
7	Iran	Tehran	Rial
8	Iraq	Baghdad	Iraqi Dinar
9	Japan	Tokyo	Yen
10	Nepal	Kathmandu	Nepalese Rupee
11	Pakistan	Islamabad	Pakistani Rupee

   c. Now, select 10 countries in Asia and type the data in appropriate cells. The worksheet will appear as shown here. If the cell content is too long, manually change the width of the column. Position the mouse pointer on the right boundary of a column heading until it turns to a double-sided arrow. Drag it to your right until the column is of the width you want.
   d. Click **FILE** tab and select **Save** option in the screen that appears.
   e. Select **Computer** and click on **Browse** button.
   f. The **Save As** dialog box appears. Type the file name as "Geography Exercise" in the **File name** box and click **Save**.

Chapter 8 Editing Cell Contents in Excel 2013

1. a. Cells b. Format c. Clear Contents d. Clipboard e. Cut
2. a. T b. F c. F d. T e. F
3. a. Row Headings are the sequentially numbered light-blue boxes along the left side of the worksheet. They help to select and identify rows.
   b. The two ways in which cell contents can be edited are: (a) overwriting and, (b) partial modification.
   c. When the **Shift cells right** option is chosen from the **Insert** dialog box, blank cells are filled in the selected range and existing cells are shifted right.
   d. In order to undo several actions at once, the user must click the menu arrow next to the **Undo** button, and from the list, select the actions that he/she wants to undo, and then click the list. Excel reverses all the actions selected.
   e. In order to move data by the drag-and-drop method, the user should position the cursor on the boundary of the selected range so that the cursor changes into a cross shape. While holding the left mouse button down, he/she should drag the data to the desired location. The data is moved when the mouse button is released.
4. a. "Amaan, Anwar" needs to be inserted before "Asad Ahmed". So, to insert a new row, first select the row 11. Click the **HOME** tab. In the **Cells** group, click the drop-down menu arrow of the **Insert** button. Select **Insert Sheet Rows**.

b. Enter the "Student Code" as "S011", "Student Name" as "Amaar Anwar" and "Date of Joining" as 27 Jan 2014.

c. "Rabab Khawar" needs to be inserted before "Rabia Hasan". So, to insert a new row, first select the row 8. Click the **HOME** tab. In the **Cells** group, click the drop-down "Rabia Hasan" menu arrow of the **Insert** button. Select **Insert Sheet Rows**.

d. Enter the "Student Code" as "S012", "Student Name" as "Rabab Khawar" and "Date of Joining" as 27 Jan 2014.

e. Similarly, "Abrar Noor" needs to be inserted before "Asad Ahmed".

f. The updated list looks as given below:

	A	B	C
1.	Student Code	Student Name	Date of Joining
2.	5001	Dawood Imam	2 Jan 2014
3.	5006	Ghazala Javed	5 Jan 2014
4.	5003	Jawad Khan	5 Jan 2014
5.	5004	Kiran Ahmed	10 Jan 2014
6.	5009	Palwarsha Ali	12 Jan 2014
7.	5002	Anam Ansari	2 Jan 2014
8.	5005	Rabia Hasan	5 Jan 2014
9.	5007	Rahail Shahid	2 Jan 2014
10.	5008	Sumair Ali	10 Jan 2014
11.	5010	Asad Ahmed	12 Jan 2014

Chapter 9 First Step to the Internet

1. a. Netiquette b. Hyperlink c. Wireless d. Net Surfing e. Email

2. a. F b. F c. T d. T e. F

3. a. The two types of Internet access connections are: Dial-up and Broadband.
   b. The speed of a modem is measured in bps(bits per second).
   c. A dongle is a small USB device that allows a user to access the Internet through a mobile broadband connection. It is also referred to as a USB modem, an Internet stick, etc.
   d. The home page is the opening page or the main page of a website, which is displayed when the address of a website is typed.
   e. A website is a collection of one or more related Web pages linked together through a system of hyperlinks.
   f. The "s" in "https://" stands for secure.

4. a. A modem is a device that allows a computer to connect and communicate with other computers. Modem stands for modulator demodulator. There are three types of modems: cable, telephone and wireless modem.
   b. A Web browser is a program used to locate and display Web pages. It also helps the user to interact with text, images, videos, music, and other information located on Web pages. Examples of Web browsers are: Microsoft Internet Explorer and Mozilla Firefox.

Notes