

2. Animation refers to the simulation of movement created by displaying a series of pictures, one after the other.
3. Media means the way through which one can convey information.
4. Name Some popular animated films.
 - Finding Nemo
 - Polar Express
 - Ice Age
 - Sindbad
5. CBT - Computer Based Tutorials.
WBT - Web Based Tutorials

III. Answer the following in detail:

1. Multimedia applications are also widely used in the fields of engineering medicine and Scientific research. For example, in engineering, multimedia tools are used for designing and testing new components and products. In medicine, doctors can be trained by viewing a Virtual surgery or by simulating a Surgical procedure, without endangering the life of a human being. A

scientist can look at the molecular model of compound and manipulate it.

2. Components of Multimedia:

- Text
- Images
- Sound
- Animation
- video

Text: Text is the primary component of multimedia. Most of the information is conveyed through the text.

Images: Images play a key role in multimedia. It is easier to e-learn and retain information from images.

Sound: Sound is a very important aspect of multimedia. The sound that you hear are analog wave patterns.

Animation: Animation are primarily used to illustrate or demonstrate an idea or a concept.

Video: Video refers to live images in motion, recorded with the help of a camera.

Class : 6 KEY ANSWERS

Chapter 1. COMPUTER FUNDAMENTALS

Page No. 13

I. Choose the correct answer:

1. a) Computers
2. c) Input
3. d) brain
4. b) three
5. a) Byte

II. Match the following:

- | | |
|------------------|--|
| 1. Input device | To feed data or instructions into the computer |
| 2. Output device | Monitors and printers |
| 3. RAM | Read/Write memory |

- | | |
|----------------------|-----------------------|
| 4. Secondary storage | Floppy |
| 5. CPU | Brain of the computer |

III. Answer the following questions in one or two words:

1.
 - Touch Screen.
 - Barcode reader
 - Digital camera
 - Scanner
2.
 - Monitor
 - Printer
 - Speaker
3.
 - Memory Unit
 - Control Unit
 - Arithmetic and logic unit
4.
 - Internal memory or primary memory
 - External memory or secondary memory
5. ROM - stands for Read Only Memory.

IV. Answer the following questions briefly:

1. A hard disk is a computer's permanent storage device.
2. RAM is also called Read/Write memory. Since we can write information into this memory and also read from it. The moment you switch off the computer, the information in RAM will be erased.
3. Information stored in ROM is permanent. They are not erased even when the power goes off. Hence, it is called nonvolatile memory.
4. The devices used to store information permanently are called secondary storage devices.
5. The Information and instructions typed through the keyboard and the output of programs are displayed on the monitor. A monitor is also called a Visual Display unit or VDU in short.

4.
 - Floppy disk drive
 - Keyboard
 - Printer
 - Monitor
 - Mouse
5. i) Click Start, select search option
ii) Type explorer in the search box.
iii) Windows Explorer window will appear.

III. Match the following:

- | | |
|---------------------|---|
| 1. Operating system | Allows to interact with the computer hardware |
| 2. Booting | Process of loading the operating system |
| 3. File | Collection of information |
| 4. Desktop | Place holder for the icons and taskbar |
| 5. Icons | Small pictures seen on the desktop |

IV. Answer the following questions briefly:

1. The Input, Output and Secondary storage devices are called Peripheral devices.
2.
 - Transfers commands given through the keyboard and mouse.
 - Sends data to the screen or printer.
3. Windows is a popular Operating system which works on the concept called GUI.
4. Once a file is created, a unique file name is given to it and stored. This distinct name helps in identifying the file easily, in the future.
5. A folder is used to store a collection of files. A folder is necessary to classify files according to their content.

Chapter 2. UNDERSTANDING WINDOWS

Page No. 25-26

I. Choose the correct answer:

1. b) Hardware
2. a) Software
3. c) operating system
4. b) GUI
5. a) desktop

II. Answer the following questions in one or two words:

1.
 - Application Software
 - System Software
2.
 - MS DOS
 - Windows
 - UNIX
 - LINUX
 - MAC OS
3. GUI Stands for Graphical User Interface

Chapter 3. MS- EXCEL – CHARTS

Page No. 32-33

I. Fill in the blanks:

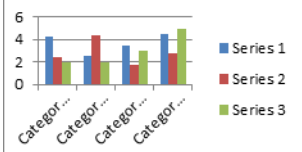
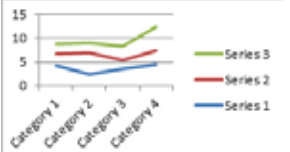
1. Chart
2. 5
3. Pie
4. Line
5. Bar/column

II. Answer the following:

- 1. A chart is a visual representative of data in both columns and rows.
- 2. Charts are usually used to analyse trends and patterns in data sets.

You can also draw charts to compare other entities based on the data that you have entered in Excel sheet.

- 3. • Pie chart
- Bar chart
- Column chart
- Line chart
- Combo chart

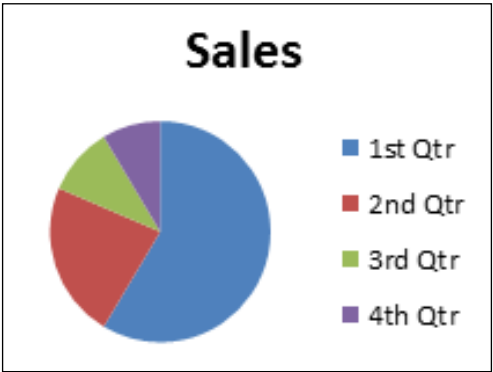
Bar Chart	Line Chart
When you want to compare values across a few categories	When you want to visualize trends over a period of time.
	

- 5. • Allows you to visualize data graphically.
- Easier to analyse trends and patterns.
- Easy to interpret compared to data in cells.

III. Answer in detail:

- Step 1: Select the data.
- Step 2: Click on the Insert tab from the ribbon.
- Step 3: Click on the Pie chart dropdown button.

Pie chart displayed on the screen.



Chapter 4. MS-ACCESS DATA ENTRY AND QUERY

Page No. 41

I. Fill in the blanks:

- 1. Tables, forms, reports and queries
- 2. Query
- 3. Run, design
- 4. Datasheet
- 5. View

II. Answer the following:

- 1. A query is a request for a specific data results.
- 2. • Select the View Datasheet view option in the ribbon.
- You can type data into one or more fields.
- 3. After creating a query, go to the Design tab and click Run option.
- 4. • Select queries
- action queries
- 5. • View data only from the fields you are interested in viewing. When you open a table, you see all the fields.
- View records that meet criteria that you specify.

Chapter 5. INTRODUCTION TO PROGRAMMING

Page No. 46

I. Fill in the blanks:

- 1. Computer program
- 2. Machine language
- 3. Binary language
- 4. Machine language
- 5. python

II. Answer the following:

1. Programming is the act of instructing computers to carryout tasks.
2. Programming language are high level languages that are written in human readable format.
3. Machines have their natural language like humans do. Computers do not understand the human language. The natural language of computers is the binary code 0 and 1. These represent two states on and off. This is called the machine language or the binary language.
4.
 - Interpreters
 - Compilers
 - a hybrid of interpreters and compilers
 - assemblers
5. Translators convert the source code to machine language.

III. Answer in detail:

1. Translator – Convert the source code to machine language.

Types of Translators:

- Interpreters
- Compilers
- a hybrid of interpreters and compilers
- assemblers

Interpreters: The translator processes the source code line by line, and runs every line in the final program.

Compilers: One of the translator, it converts the source code entirely to binary via a compilation process.

Hybrid translator: A hybrid translator is a combination of both interpreter and compiler.

Assembler: Convert assembly language into binary language.

2. Programming is the act of instructing computers to carryout tasks. It is often referred to as coding.

Computer Program: A computer program is a sequence of instruction that the computer executes, to achieve a particular output or to complete a task.

Examples: Top five programming languages currently are, Java, Python, Javascript, C/CPP, PHP.

Chapter 6. ALGORITHM AND FLOW CHART

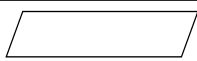
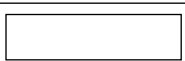
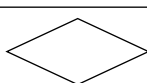
Page No. 51

I. Fill in the blanks:

1. Algorithm and Flowchart
2. Flowchart
3. Problem
4. Algorithm
5. Terminal box

II. Answer the following:

1. A flowchart is the graphical or pictorial representation of a given problem.
2. Algorithm is a step-by step procedure to solve a given problem.

1.	Terminal box	
2.	Input / Output	
3.	Process	
4.	Decision	
5.	Connector	

Algorithm	Flowchart
It is a procedure for solving problems.	It is graphic representation of a process.
It is easier to solve complex problem.	It is hard to solve complex problems.

5. Find the smallest of two numbers.
Step 1: Start the program.
Step 2: Read a and b
Step 3: Check if a is less than b, then print a is smallest number.
Step 4: If false Print b is smallest number.
Step 5: stop the program.

III. Answer in detail:

1. Refer the book Page No.49
2. Refer the book page No. 49 & 50.

Chapter 7. INTRODUCTION TO 'C' PROGRAMMING

Page No. 61

I. Fill in the blanks:

1. C programming
2. 1972, Dennis M. Ritchie
3. UNIX
4. ANSI [American National Standard Institute]
5. Linker

II. State True or False:

1. TRUE
2. TRUE
3. FALSE
4. FALSE
5. TRUE

III. Answer the following:

1. C programming is a general purpose, procedural and important computer programming language.
2. Refer Book Pg.No 52
3. Refer Book Pg.No. 52, 53
4. Token is the smallest individual element in C.

IV. Answer in Detail:

1. Refer Book Pg.No. 59
3. Refer Book Pg.No. 53

Chapter 8. INTRODUCTION TO ROBOTICS

Page No. 69

I. Fill in the blanksL

1. Asimov
2. Adept's SCARA robots, Cognex in-sight robot, Barrett technology manipulator
3. Law 3
4. Four
5. Two

II. Match the following:

2, 3, 1, 0

III. Answer the following:

1. Robot is a reprogrammable, multifunctional manipulator, designed to move material, parts, tools or specialized devices through variable programmed motions for the performance of a variety of tasks.
2. Refer Book Pg.No 66
3. Adept's SCARA robots, Cognex in-sight robot, Barrett technology manipulator
4. Refer Book Pg.No.68
5. Refer Book Pg.No.65

IV. Answer in detail:

1. Refer Book Pg.No 66
2. Refer Book Pg.No. 68

Chapter 9. INTRODUCTION TO CIRCUITRY USING MICROCONTROLLERS

Page No. 76

I. Fill in the blanks

1. Circuitry
2. micro controller
3. BBC

II. State True or False:

1. TRUE
2. FALSE
3. TRUE
4. FALSE
5. TRUE

III. Answer the following:

1. Circuitry is a system of electric circuits through which signals can travel from one component to another.
2. A microcontroller is a board that consists of many components that are connected to each other.
3. micro:bit is a pocket-sized computer that introduces you to how software and hardware work together.
4. Buttons, LED display & light sensor, Pins – GPIO, Pin-3 volt power, Pin-Ground, Touch logo, Microphone LED – new, Programming the micro:bit

IV. Answer in detail:

1. Refer Book Pg.No 72, 73
2.

```
from microbit import *  
# Define smiley face pattern  
smiley_face = Image("00000:"  
    "09090:"  
    "00000:"  
    "90009:"  
    "09990")
```

```
# Display smiley face  
display.show(smiley_face)  
sleep(2000) # Wait for 2 seconds
```

```
# Display message "Coding is fun!"  
display.scroll("Coding is fun!")
```

Smiley Fun with Coding

Write down the code to display the message "Coding is fun!" using a micro:bit, following a smiley face.

```
from microbit import *  
# Define smiley face pattern  
smiley_face = Image("00000:"  
    "09090:"  
    "00000:"  
    "90009:"  
    "09990")
```

```
# Display smiley face  
display.show(smiley_face)  
sleep(2000) # Wait for 2 seconds  
# Display message "Coding is fun!"  
display.scroll("Coding is fun!")
```

This code first defines a smiley face pattern using a 5x5 grid of pixels.

The Image() function is used to create a custom image using 0s and 9s. Each 0 represents an off pixel, and each 9 represents an on pixel.

The smiley face pattern is then displayed on the LED screen using the display.show() function.

After displaying the smiley face for 2 seconds (sleep(2000)), the code uses the display.scroll() function to scroll the message "Coding is fun!" across the LED screen.

Class : 7 KEY ANSWERS

Chapter 1. WORKING PRINCIPLES OF A COMPUTER

Page No. 8-9

I. Choose the correct answer:

1. A) System Unit
2. C) Both a and b

3. C) Main Memory
4. B) 3
5. B) Trouble Shooting

II. Fill in the blanks:

1. PS/2
2. Mother Board