Class 8

Answer Key

iPlus Ver. 2.0

1. Operating System

Let's Catch Up (Page 8)

System software helps the user to operate the computer system & utilize its different resources. It coordinates the operation and functioning of a computer along with the attached hardware components of the computer. System software acts as an

interface or a bridge between the user and the computer.

Application software refers to programs which are designed to accomplish particular type of tasks to meet a user's specific needs. This type of software allows users to do their work more efficiently and easily, for example, Tally software is used to do accounts-related tasks in organisations and Microsoft Word is used to perform day-to-day work such as typing letters and documents.

Exercise

Section A (Objective)

A. 1. b 2. a 3. a 4. a 5. b
6. d

B. 1. DOS 2. Operating system 3. CUI 4. GUI
5. Tally software,

C. 1. False 2. True 3. False 4. True 5. True

D. 1. c 2. d 3. e 4. a 5. b

Section B (Subjective)

A. 1. Single-user Operating System and Multi-processing Operating System are two types of operating system.
2. Two categories of software are: System software and application software.
3. Two disadvantages of character user interfaces are:

IMPRINT 1

a. People find it difficult to remember all the commands.

b. It is not user-friendly.

4. Names of two GUI operating system are: Windows and Mac.

B. 1. The differences between CUI and GUI are:

CUI

a. It provides lots of commands to perform different types of operations.

b. A user needs to remember lots of commands.

c. It uses keyboard to give commands.

d. Examples are DOS, Windows Command Prompt, etc

GUI

a. It provides icons, buttons, windows and menus to give commands

b. A user need not to remember commands. He can just click on the icons, menus etc.

c. It uses mouse, stylus, fingers to give commands.

d. Examples are Windows, Mac, etc.

2. An operating system perform various functions:

a. Managing Memory: An operating system manges the memory space for multiple processes. It keeps track of every memory location, regardless of either it is allocated to some process or it is free. It also allocates memory to the files and folders. When we delete a file or folder, the operating system de-allocates the memory space allocated for it.

b. Managing Resources: An operating system keeps a track of the hardware and software requirements of the processes. It works as a manager of the resources and allocates them to different programs.

c. Assigning Tasks to the CPU: An Operating system handles the scheduling, synchronization, processing suspension and resumption of processes. Operating system can independently prioritize jobs for processing.

d. Security: An Operating system protects information and resources against unauthorised access using login and password.

3. We prefer to use GUI as in this interface, a user need not to remember all the commands.

GUI allows us to give commands to the computer simply by clicking with the mouse.

4. a. In this type of operating system, multiple users can use the computer at the same time. Examples of multi-user operating systems are Linux, Windows, etc.

b. It processes instructions and produces a response within a specified time. It is a computing environment that reacts to input within specified time.

Example: ATM, traffic signal, etc.The data can be erased and modified as many times as required.

C. **Competency-based/Application-based questions:**

1. Tally is an application software.
2. As a beginner, he should take the computer with GUI.
3. c

Crack The Code

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

2. Spreadsheet—Functions and Charts

Let's Catch Up (Page 32)

1. F 2. T 3. T 4. F

Exercise

Section A (Objective)

A. 1. a 2. a 3. c 4. b 5. b
6. a 7. c 8. c

B. 1. Functions 2. SQRT 3. column 4. Mixed 5. custom sort

C. 1. False 2. False 3. True 4. True 5. False 6. False

D. 1. b 2. c 3. d 4. a

Section B (Subjective)

A.

1. A group of cells is known as a cell range. A range comprises two or more selected cells and those selected cells need not be adjacent to each other.
2. a. Data labels refer to the label that provides additional information about data marker, thus representing a single data item or value of a cell.

   b. Legend is a key which shows the meanings of symbols and colours used in the chart.
3. Arranging the selected data in ascending or descending order is called sorting.
4. Scatter charts are also known as XY scatter plot charts. They display the relationships among the numeric values of several data series.

B.

1. CONCATENATE function joins two or more different text strings together. For example:

   Input: =CONCATENATE("Touch", "pad")

   Output: Touchpad
2. Rules to enter Functions are:

   a. All Excel functions must begin with = sign

   b. Function name must be a valid Excel name.

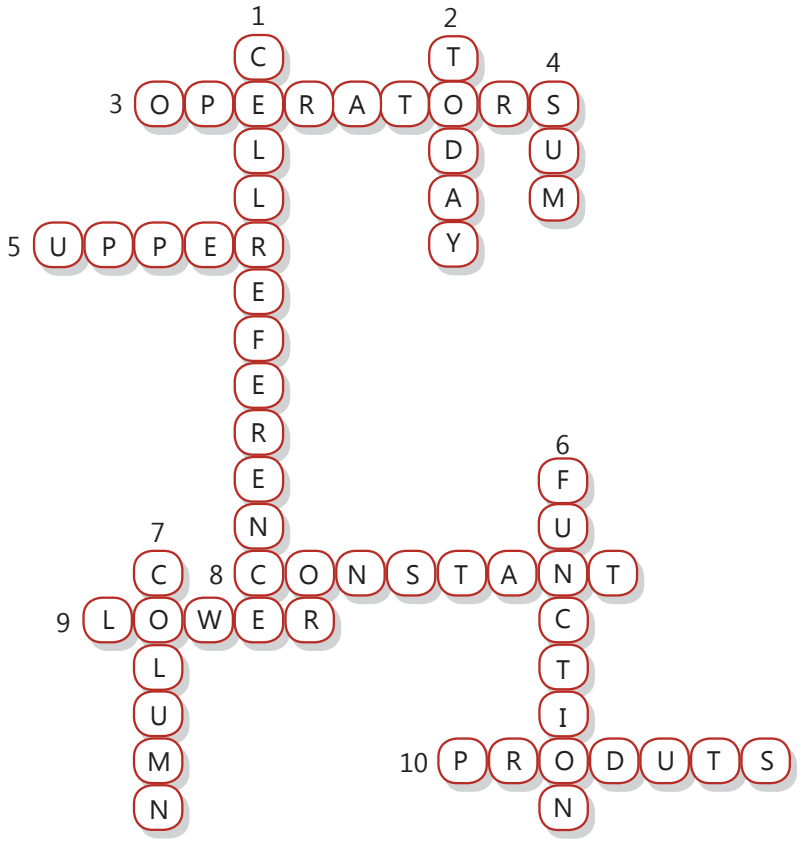
   c. Function must be followed by opening and closing parenthesis.

   d. Most of the functions must contain an argument within it.
3. Column Chart is usually used to display the data in the form of vertical bars. It is used to show the changes in data over a period of time or comparison among the different data items. Whereas, Scatter charts show the correlations between the two sets of values. The x and y axis is used to represent the data plots on the chart.

C. **Competency-based/Application-based questions:**

1. Pie Chart
2. Cell Referencing
3. Sort & Filter feature
4. c

Crack The Code



3. Algorithms and Flowcharts

Let's Catch Up (Page 44)

Step 1: Start.

Step 2: Read the length of the base of the triangle and store it in 'b.'

Step 3: Read the height of the triangle and store it in 'h.'

Step 4: Calculate the area of the triangle using the formula:

Area = (1/2) × base × height

Step 5: Print the area of the triangle.

Step 6: Stop.

Exercise

Section A (Objective)

A. 1. c 2. b 3. b 4. a

B. 1. algorithm 2. connectors 3. consistent 4. two 5. flowchart

C. 1. True 2. False 3. True 4. True 5. True

Section B (Subjective)

A. 1. Algorithm is a set of steps in a sequential manner to solve a problem or to complete a task.

2. Flowchart is a graphical representation of the sequence of operations in an information system or program.

3. Two symbols used in flowchart are rectangle and circle.

4. Two uses of an algorithm are:

   a. Performing data processing

   b. Performing computer and mathematical operations

B. 1. You must follow these basic rules while drawing a flowchart:

   a. The flowchart should be clear, neat and easy to follow.

   b. Maintain the direction of the flow from left to right or top to bottom.

   c. Only one flow line should come out from a process symbol.

   d. Ensure that only one flow line should enter a decision symbol, but two flow lines should leave the decision box.

   e. Ensure that the flowchart has a logical start and end.

2. The main characteristics of a good algorithm are:

   a. **Precision:** Each step is precisely defined.

   b. **Uniqueness:** Result of each step should be uniquely identified and only depend on the result of the preceding step.

   c. **Finiteness:** It should stop after a finite number of instructions are executed.

   d. **Input:** It should have well-defined input.

   e. **Output:** It should have well-defined output.

   f. **Effective:** It is measured in terms of time and space.

3. **Process symbol:** It is used to show a process or action step. This is the most common symbol used in flowcharts.

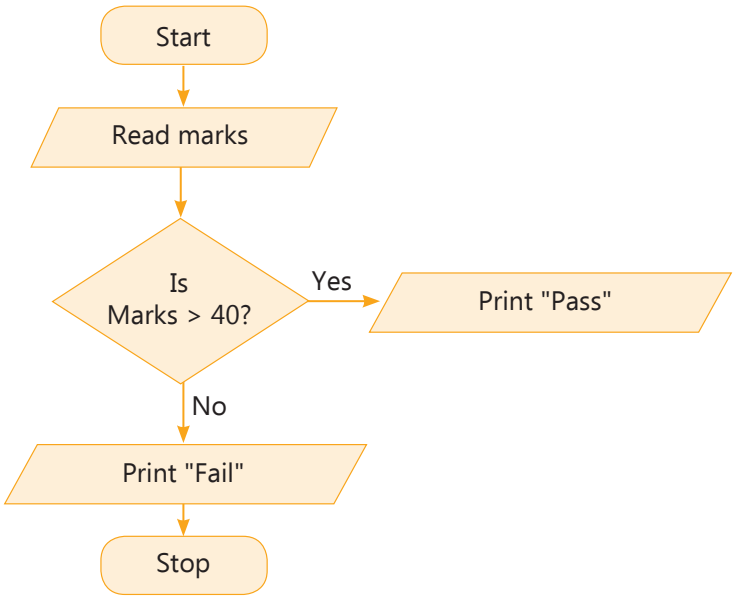
   Input/Output: It is used to represent the material or information entering or leaving the system, i.e., input and output.

C. 1. a. Input b. Process c. Output

2. Richa should make an algorithm before drawing a flowchart.

Crack The Code

A.



B.

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