



Answer Key

iPlus Ver. 2.0



1. Computer—Hardware Components

LET'S CATCH UP



(Page 16)

- | | | | |
|--------------|--------------|------------|--------------|
| 1. Scanner | 2. Mouse | 3. Printer | 4. Projector |
| 5. Pen Drive | 6. Hard Disk | | |

Exercise

Section A (Objective)

- A.** 1. a 2. a 3. c 4. b 5. a
6. a 7. c
- B.** 1. output devices 2. store 3. 3D camera 4. input devices
5. Wireless
- C.** 1. F 2. F 3. F 4. F 5. T

Section B (Subjective)

- A.** 1. Modem stands for Modulator-Demodulator.
2. The types of scanners are:
a. Hand-Held scanner
b. Flatbed scanner
c. Sheetfed scanner
3. Yes, mouse and keyboard can be wireless.
4. A virtual keyboard is operated by typing on a detectable surface rather than pressing physical keys.



IMPRINT 1

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5. CD- RW stands for Compact Disk Rewritable.
6. Skylake is Intel's multi-core chips code which boots graphics and applications while improving battery and life in laptops.

B. 1. The differences between Input and Output Devices are as follows:

Input Devices

- a. Input devices are devices through which a computer accepts data and instructions.
- b. Example of the input devices are:

Mouse, Keyboard

Output Devices

- a. Output devices are devices through which a computer displays the information and result of computation to the user.
- b. Example of the output devices are:

Monitor, Printer

2. CPU (Central Processing Unit) is a processor, sometimes called a microprocessor. It is the brain of the computer that does all the calculations and runs all the programs.
It manages all the operations and carries out the basic instructions which operate a computer.
3. Modems are of two types: internal and external. An internal modem is located inside the CPU box, just like the motherboard plate. On the other hand, an external modem is a separate device that you can connect to the computer with the help of a USB port. It generally contains indicators in the form of small lights.
4. A port is a slot on the motherboard that is used to connect other components of the computer such as keyboard, mouse, monitor, etc. to the motherboard. Three types of ports are:
 - a. Serial Port
 - b. Universal Serial Bus (USB) Port
 - c. Parallel Port
5. Different types of CDs are:
 - a. **CD-ROM (Compact Disc Read Only Memory):** A CD-ROM is a CD that contains data that was written when the CD was manufactured. The data cannot be modified or erased.
 - b. **CD-R (Compact Disc Recordable):** A CD-R can be used to write data by the user only once. This data cannot be changed or erased.
 - c. **CD-RW (Compact Disc Rewritable):** A CD-RW can be used to write data again and again. The data can be erased and modified as many times as required.



C. Competency-based/Application-based questions:

1. Graphic Tablet
2. Drum Plotter



Crack The Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P | A | P | E | A | U | B | V | S | M | P | S |
| R | M | O | D | E | M | E | I | O | N | D | O |
| I | M | R | O | Z | N | A | D | R | F | A | U |
| M | T | T | U | V | R | L | E | Q | L | T | N |
| M | O | T | H | E | R | B | O | A | R | D | D |
| R | Z | Y | U | M | P | T | C | F | Q | B | C |
| A | L | M | S | I | E | O | A | B | Q | A | A |
| K | S | U | V | O | R | B | R | Z | R | S | R |
| E | L | L | O | C | T | L | D | A | F | E | D |

2. Number System

LET'S CATCH UP



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1. Divide 26 by 2: $26 \div 2 = 13$ with a remainder of 0.
2. Write down the remainder (0) as the rightmost digit of your binary number.
3. Now, divide the quotient (13) by 2: $13 \div 2 = 6$ with a remainder of 1.
4. Write down the remainder (1) to the left of the previous remainder.
5. Continue this process by dividing the new quotient (6) by 2: $6 \div 2 = 3$ with a remainder of 0.
6. Write down the remainder (0) to the left of the previous remainders.
7. Again, divide the new quotient (3) by 2: $3 \div 2 = 1$ with a remainder of 1.
8. Write down the remainder (1) to the left of the previous remainders.
9. Continue one more time by dividing the last quotient (1) by 2: $1 \div 2 = 0$ with a remainder of 1.
10. Write down the remainder (1) to the left of the previous remainders.

You should have the binary representation of 26 as 11010.

So, in binary, 26 is represented as 11010.



IMPRINT 1

Exercise

Section A (Objective)

- A.** 1. b 2. a 3. c 4. b 5. a
- B.** 1. 0 2. 2 3. base-2 system 4. 12
5. binary
- C.** 1. T 2. T 3. T 4. T 5. T

Section B (Subjective)

- A.** 1. A number system made up of eight digits from 0 to 7, is known as the octal number system.
2. A number system is a way to express quantities used for counting, comparing amounts, performing calculations and representing values.
3. The total number of digits used in a number system is called its base or radix. For example, in binary number system every number is formed using only 0 and 1, that's why the base of the binary number is 2.
- B.** 1. To convert a decimal number into a binary number:
Step 1 Divide the decimal number by 2 (the base of the binary number system).
Step 2 Note down the quotient and the remainder.
Step 3 Divide the quotient obtained again by 2 and note down the resulting quotient and remainder.
Step 4 Repeat the procedure till you reach a quotient less than 2.
Step 5 List the last quotient and all the remainders (moving from bottom to top).
2. To convert a binary number into a decimal number, follow the given steps:
a. Multiply each digit of the binary number by 2 to the power of n, where n is the position of the digit starting from 0 on the right.
b. Add the result.

Example:

Convert $(101001)_2$ to decimal number.

$$= (1 \times 2^5) + (0 \times 2^4) + (1 \times 2^3) + (0 \times 2^2) + (0 \times 2^1) + (1 \times 2^0)$$

$$\text{Sum of the products} = 32 + 0 + 8 + 0 + 0 + 1 = 41$$

$$\text{Therefore, } (101001)_2 = (41)_{10}$$



3. The rules for subtract two binary numbers are:

| X | Y | X + Y |
|---|---|---|
| 0 | 0 | $0 - 0 = 0$ |
| 0 | 1 | $0 - 1 = 1$ (borrow 1, so that $10 - 1 = 1$) |
| 1 | 0 | $1 - 0 = 1$ |
| 1 | 1 | $1 - 1 = 0$ |

C. Competency-based/Application-based questions:

1. $(256)_8$ belongs to octal number system and $(10001)_2$ belongs to binary number system. He can tell this from the base.

2. Hexadecimal number system

D. 1. $(10111.011)_2 = 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0 + 0 \times 2^{-1} + 1 \times 2^{-2} + 1 \times 2^{-3}$
 $= 1 \times 16 + 0 + 1 \times 4 + 1 \times 2 + 1 \times 1 + 0 + 1/4 + 1/8$
 $= 16 + 4 + 2 + 1 + 0.25 + 0.125$
 $= (23.375)_{10}$

2. (a)

$$\begin{array}{r}
 1 \ 0 \ 0 \ 0 \\
 + \quad 1 \ 0 \ 1 \\
 \hline
 1 \ 1 \ 0 \ 1
 \end{array}$$

(b)

$$\begin{array}{r}
 \overset{1}{\circ} \ \overset{1}{\circ} \ \overset{1}{\circ} \text{--- Carry} \\
 1 \ 0 \ 1 \ 1 \\
 + \quad 1 \ 0 \ 1 \\
 \hline
 1 \ 0 \ 0 \ 0 \ 0
 \end{array}$$

(c)

$$\begin{array}{r}
 \quad \quad \overset{1}{\circ} \text{--- Carry} \\
 1 \ 0 \ 0 \ 1 \\
 + \quad 1 \ 0 \ 1 \\
 \hline
 1 \ 1 \ 1 \ 0
 \end{array}$$

(d)

$$\begin{array}{r}
 \overset{1}{\circ} \ \overset{1}{\circ} \ \overset{1}{\circ} \text{--- Carry} \\
 1 \ 1 \ 1 \ 1 \\
 + \quad 1 \ 1 \ 1 \ 1 \\
 \hline
 1 \ 1 \ 1 \ 1 \ 0
 \end{array}$$

3. (a)

| | |
|---|--------|
| 2 | 39 - 4 |
| 2 | 19 - 1 |
| 2 | 9 - 1 |
| 2 | 4 - 1 |
| 2 | 2 - 0 |
| | 1 - 0 |
| | |

Hence, $(39)_{10} = (100111)_2$

(b)

| | |
|---|--------|
| 2 | 72 |
| 2 | 36 - 0 |
| 2 | 18 - 0 |
| 2 | 9 - 0 |
| 2 | 4 - 1 |
| 2 | 2 - 0 |
| | 1 - 0 |

Hence, $(72)_{10}$
 $= (1001000)_2$

(c)

| | |
|---|--------|
| 2 | 128 |
| 2 | 64 - 0 |
| 2 | 32 - 0 |
| 2 | 16 - 0 |
| 2 | 8 - 1 |
| 2 | 4 - 0 |
| 2 | 2 - 0 |
| | 1 0 |

Hence, $(128)_{10}$
 $= (10000000)_2$

(d)

| | |
|---|--------|
| 2 | 55 |
| 2 | 27 - 1 |
| 2 | 13 - 1 |
| 2 | 6 - 1 |
| 2 | 3 - 0 |
| | 1 - 1 |
| | |

Hence, $(55)_{10} = (110111)_2$

(e)

| | |
|---|--------|
| 2 | 173 |
| 2 | 86 - 1 |
| 2 | 43 - 0 |
| 2 | 21 - 1 |
| 2 | 10 - 1 |
| 2 | 5 - 0 |
| 2 | 2 - 1 |
| | 1 - 0 |

Hence, $(173)_{10}$
 $= (10101101)_2$



Crack The Code

- A.**
- $(5)_{10}$
 - $(11111010)_2$
 - $(43)_{10}$
 - $(187)_{10}$
- B.**
- 011001
 - 01101



3. Computer Virus

LET'S CATCH UP



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AVG



Norton



McAfee

Exercise

Section A (Objective)

- A.** 1. d 2. c 3. b 4. c 5. d
6. a 7. a 8. d
- B.** 1. malware 2. antivirus 3. firewall 4. trojan horse
- C.** 1. F 2. F 3. T 4. T 5. T

Section B (Subjective)

- A.** 1. A macro virus is a type of computer virus that is primarily designed to infect a specific type of document, such as Word or Excel files.
2. Computer viruses-spread in several ways. Some of them are:
- a. Using virus-infected CDs/Pen Drives.
 - b. Opening an infected e-mail attachment.
 - c. Downloading an infected program from the Internet, Pen Drives, CDs or DVDs.
 - d. Running an infected program (which can be a game, screen saver, etc.).
 - e. Through local computer networks.
3. a. Trojan horse is a dangerous virus. It represents itself as helpful software program. Once the user clicks on it to agree to run it, it gains access to sensitive data and then modifies, blocks, or deletes the data.
- b. Backdoor is a type of malicious software which enters the computer bundled with other software or files. It is used to gain remote access to the host computer.
4. MBR stands for Master Boot Record.
- B.** 1. A malware is a type of malicious program designed to damage or carry out other unwanted actions on a computer system. Malware can affect the computer in the similar way a virus



- do. Some of the common malwares are worm, Trojan horse, spyware, ransomware, rootkit and backdoor.
2. A computer virus is a piece of code or program developed to corrupt the data or program files stored on the computer system. A computer worm is a type of malware that has the capability to replicate itself without any human interaction.
 3. Two symptoms of an infected computer are:
 - a. Start displaying unusual messages on the screen.
 - b. Load the programs late.
 4. The ways we can protect our system from malware attack are:
 - a. Download only legal software.
 - b. Use the original version of Windows.
 - c. Scan Pen drive, CD and any other external storage device for viruses before opening in computer.
 5. Some of the most dangerous malwares known are:
 - a. Wabbit Virus (1974) makes multiple copies of itself until the system slows down and crashes.
 - b. ILOVEYOU Virus (2000) worked by sending a fake "love letter" that looked like a harmless text file.
 - c. Code Red Worm (2001) would spread itself with the message: "Hacked By Chinese!"
 - d. Mydoom Worm (2004) scraped addresses from infected machines, then sent copies of itself to those addresses.
 - e. Storm Worm (2007) attacked millions of computers with an email about approaching bad weather.
- C.**
1. Ravi should scan the pen drive first.
 2. Don't open any unknown email.

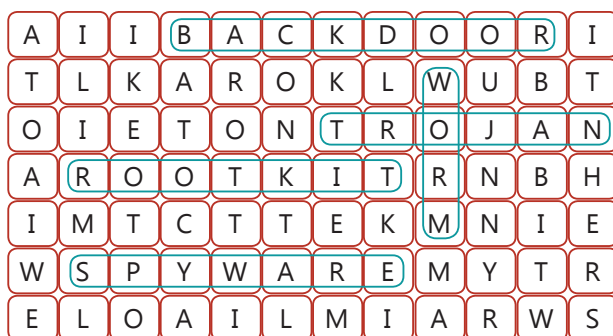


Crack The Code

- A.**
1. Worms
 2. Trojan
 3. Ransomware
 4. Program File Virus
 5. Antivirus



B.



4. Ethics and Safety Measures in Computing

LET'S CATCH UP



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- Spamming refers to the sending of bulk mail by an identified or unidentified source.
- Cyberbullying refers to the use of Internet, e-mail, instant messaging, chat rooms or social networks, such as Facebook, Twitter, etc. to harass, demean, embarrass or intimidate someone else.
- Phishing is a cybercrime in which an e-mail that Fly claims to be from a trusted organisation is sent to a user. This type of e-mail generally contains a link to a website.
- Hacking is another common method used by cybercriminals to trouble victims. Hacking is the process of using malware or other tricks to obtain your e-mail ID and password, cybercriminals can gain access to your critical information like social media accounts, bank accounts, etc.

Exercise

Section A (Objective)

- A.** 1. b 2. c 3. c 4. b 5. a
6. b 7. c
- B.** 1. Internet 2. Cybercrimes 3. Patent 4. Phishing 5. Spam
- C.** 1. F 2. T 3. T 4. F 5. F

Section B (Subjective)

- A.** 1. A forum is an online discussion site where people with similar interests can post messages, share their views, and get others' ideas on a certain topic of their choice.



IMPRINT 1

iPlus Ver. 2.0-VII (Answer Key)



2. There are various social networking sites that help us connect with people who are geographically separated. One can share his or her pictures, videos, and messages with others connected through the internet by using Facebook, Instagram, Twitter, etc. This is known as easy communication.
 3. Two measures to protect intellectual property rights are:
 - a. Don't share your business ideas with others.
 - b. Have detailed drawings, descriptions, plans, and records that can prove it is your creation.
 4. Two ways to stop cyberbullying are:
 - a. Never share personal details such as age, address, date of birth, etc. with unknown people on social media.
 - b. Never install unwanted software and apps like dating app, online games, etc. from unknown sources.
 5. Computer Ethics are the common guidelines that we need to follow while using the computer. These are also known as etiquettes and they tell us how to use the computer wisely.
- B.**
1. Patent is the right that gives an inventor the complete right to make, use, and sell his or her work for a specific time period.
On other hand, Trademark is a symbol or word legally registered or established used as representing a company or product.
 2. Three advantages of Internet are:
 - a. Internet is used by people for entertainment. People can listen to music, watch movies and play games through Internet.
 - b. Internet also helps companies to promote their products online through websites and social networking sites.
 - c. Internet provides many useful services to us like Chatting, E-mail, Video Conferencing, etc., which help people to connect to each other all around the world.

Three disadvantages of Internet are:

 - a. It is a wastage of time as with the excessive use of the Internet people get addicted to it and spend lots of time on surfing.
 - b. Internet has also increased the cases of virus attacks.
 - c. Users can lost their data and programs in these virus attacks.
 3. Three protective measures to avoid plagiarism are:
 - a. Acknowledge the original writer and the source from where the material has been taken.
 - b. Use " " for statements quoted by another person.
 - c. As soon as you have a business name and logo for your idea, you should register those Trademarks right away



4. Indian laws and government initiatives that enforce cybersecurity are:

a. Information and Technology Act, 2000

This act is also known as the Indian Cyber Act. It provides legal recognition to all e-transactions and aims to protect online privacy and curb online crimes.

b. Information Technology Amendment Act, 2008

This law aims to protect data privacy and information security. It validates digital signatures and contracts. According to this act, the owner of a given IP address will be held responsible for the content accessed or distributed through it.

c. National Cybersecurity Policy, 2013

It is a policy in India that aims to protect public and private infrastructure from cyber-attacks and safeguards personal, financial, and banking information.

C. Competency-based/Application-based questions:

1. Tips to safeguard from spamming are:

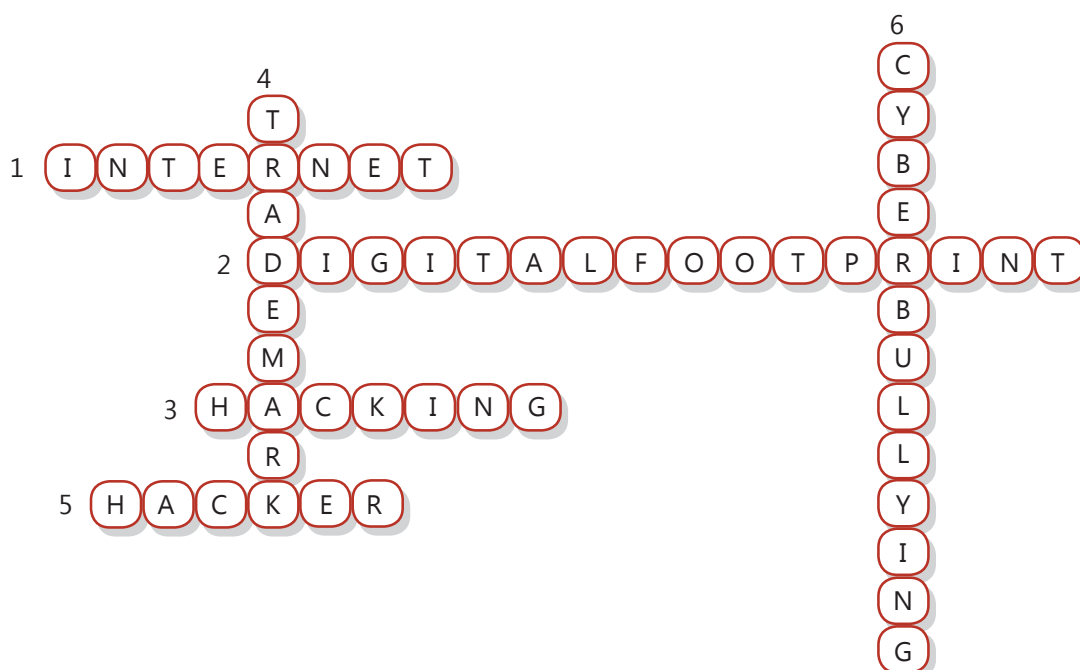
- a. Preview your messages before opening them.
- b. Do not open doubtful e-mails.
- c. Don't reply to a Spam e-mail.

2. Rajiv can look for the green lock sign at the left most side of the address bar in the browser.

This signifies that the website is secure.



Crack The Code



5. Spreadsheets—An Introduction

LET'S CATCH UP



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

Exercise

Section A (Objective)

- A.** 1. c 2. c 3. a 4. d 5. a 6. d
- B.** 1. Data
2. **(This question was printed incorrectly in the book, please correct it in your textbook)**
- Question.** The active cell in a worksheet is known as the _____.
- Ans.** Cell Pointer
3. Quick Access 4. Formula 5. block
- C.** 1. T
2. **(This question was printed incorrectly in the book, please correct it in your textbook)**
- Question.** The left section of status bar has view control buttons.
- Ans.** F
3. T 4. F

Section B (Subjective)

- A.** 1. Functions are the built-in formulas used for calculating percentage, interest, average, etc., in Excel.
2. Name box is a box located on the left side of the Excel window, just below the Ribbon. The address of the active cell is displayed in this box.
3. The currently selected cell that appears highlighted with a dark black border is an active cell.
4. A cell range is a collection of two or more cells.
- B.** 1. Worksheet tab navigation buttons are located on the left side of the worksheet tabs. These are used to move from one worksheet to another in a workbook. We can also directly click on the worksheet tab to make it active.
2. A worksheet is a main working area in excel window where we can enter data. A workbook is a collection of different worksheets.
3. Column heading is the grey-coloured alphabet letter (A, B, C, etc.) located at the top of each column.
4. To create a new workbook in Excel 2019, follow these steps:



- Step 1:** Click on File tab.
- Step 2:** Click on the New option.
- Step 3:** Click on blank workbook.
- A new workbook will be created.

C. Competency-based/Application-based questions:

- The steps to save a new workbook are:

Step 1: Click on the File tab.

Step 2: Click on Save or Save As option.

Step 3: Click on Browse option.

Step 4: Select the location where you want to save your workbook.

Step 5: Type a name for your file in the File name box.

Step 6: Click on the Save button.
- (d) Assertion (A) is false and Reason (R) is true



Crack The Code

- D3
- D5
- E4
- C4
- B4
- G4

6. More on Spreadsheets

LET'S CATCH UP



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- Step 2:** Click the arrow next to the Number Format box.
- Step 4:** Select the Number category.
- Step 5:** Click on the OK button.
- Step 3:** Click on the More Number Formats option to see more details of number formats.
- Step 1:** Click on the cell(s) that contains the numbers that you want to format.

Exercise

Section A (Objective)

- | | | | | | | |
|-----------|-----------|----------------|---------------|-------------|------|------|
| A. | 1. d | 2. a | 3. a | 4. c | 5. b | 6. a |
| B. | 1. Insert | 2. Cell Styles | 3. Select All | 4. AutoFill | | |
| C. | 1. T | 2. F | 3. T | 4. T | 5. T | |



Section B (Subjective)

- A.** 1. Yes, we can merge the unmerged cells. The command which is used to merge the cells is Merge cells command.
2. Cut command is used to move the contents of one cell to other cells and remove it from its original place.
3. Wrap text feature of MS Excel allows user to display multiple lines of text inside a cell.
- B.** 1. To create a custom formats follow the given steps:
- Step 1:** Click on the cell(s) that contains the numbers that you want to format.
- Step 2:** Click the arrow next to the Number Format box.
- Step 3:** Click on the More Number Formats option to see more details of number formats.
- Step 4:** Select the Number category.
- Step 5:** Click on the OK button.
2. Steps to change row height and column width are:
- Step 1:** Select the column(s) or row(s) whose width or height you want to change.
- Step 2:** Click on Format command in Cells group from Home tab.
- Step 3:** Choose Column Width or Row Height under Cell Size section.
- Step 4:** In the Column Width or Row Height box, type the value that you want your column or row.
- Step 5:** Click on OK button.
3. Steps to apply cell style are:
- Step 1:** Select the cell or range of cells.
- Step 2:** Click on the Home tab.
- Step 3:** Click on the Cell Styles command.
- Step 4:** Choose the desired Cell Styles option.
4. The elements of a formula are:
- References:** A cell or a range of cells that you want to use in your calculation.
- Operators:** Symbols (+, -, *, /, ^, \$, %, etc.) that specify the calculations to be performed.
- Constants:** Numbers or text values that do not change.
5. When performing calculations using a formula, Excel follows certain rules of precedence:
- Excel calculates expressions within parentheses '(' , ')' first.
 - Excel calculates multiplication and division before addition and subtraction.
 - Excel calculates consecutive operators with the same level of precedence from left to right.

C. Competency-based/Application-based questions:

1. She can use Word Wrap on the active cell.
2. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A)



Crack The Code

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



WORKSHEET 1

(Based on chapter 1 to 6)

1. The total number of digits used in a number system is called its base or radix.
 2. Hexadecimal number system consists of 16 digits, 0 to 9 and A to F.
 3. In BEDMAS rule, E stands for Exponentiation.
1. A macro virus is a type of computer virus that is primarily designed to infect a specific type of document, such as Word or Excel files.
 2. Appearance of unexpected pop-ups on the system.
 3. Rootkit is a malware that gains administrator access to the host system.
 4. A forum is an online discussion site where people with similar interests can post messages, share their views, and get others' ideas on a certain topic of their choice.
 5. Patent is the right that gives an inventor the complete right to make, use, and sell his or her work for a specific time period.
 6. Cybercriminals portray incorrect details as an employer.
1. Click on the cell to select it.
 2. Click on the first cell from where you want to start the selection and drag the mouse diagonally up to the cell where you want to make the selection.



3. Click on the row heading to select the entire row, or click on the column heading to select the entire column.
 4. Click on the Select All button located below the Name box to select the entire worksheet.
- D.**
1. Wrap Text
 2. AutoFill
 3. Reference

Test Sheet 1

(Based on chapter 1 to 6)

Section A

- A.**
- | | | | | |
|------|------|------|------|------|
| 1. a | 2. a | 3. c | 4. b | 5. a |
| 6. d | 7. b | 8. a | | |
- B.**
- | | | | |
|-------------------|----------------|--------------|----------------|
| 1. output devices | 2. 0 | 3. antivirus | 4. Cybercrimes |
| 5. Formula | 6. Cell Styles | | |
- C.**
- | | | | | | |
|------|------|------|------|------|------|
| 1. F | 2. T | 3. T | 4. F | 5. F | 6. F |
|------|------|------|------|------|------|

Section B

- A.**
1. A number system is a way to express quantities used for counting, comparing amounts, performing calculations and representing values.
 2. Modem stands for Modulator-Demodulator.
 3. A macro virus is a type of computer virus that is primarily designed to infect a specific type of document, such as Word or Excel files.
 4. Two ways to stop cyberbullying are:
 - Never share personal details such as age, address, date of birth, etc. with unknown people on social media.
 - Never install unwanted software and apps like dating app, online games, etc. from unknown sources.
 5. Name box is a box located on the left side of the Excel window, just below the Ribbon. The address of the active cell is displayed in this box.
 6. Wrap text feature of MS Excel allows user to display multiple lines of text inside a cell.
- B.**
1. The differences between Input and Output Devices are as follows:
 Input Devices
 - a. Input devices are devices through which a computer accepts data and instructions.
 - b. Example of the input devices are:
 Mouse, Keyboard



Output Devices

a. Output devices are devices through which a computer displays the information and result of computation to the user.

b. Example of the output devices are:

Monitor, Printer

2. To convert a binary number into a decimal number, follow the given steps:

a. Multiply each digit of the binary number by 2 to the power of n, where n is the position of the digit starting from 0 on the right.

b. Add the result.

Example:

Convert $(101001)_2$ to decimal number.

$$= (1 \times 2^5) + (0 \times 2^4) + (1 \times 2^3) + (0 \times 2^2) + (0 \times 2^1) + (1 \times 2^0)$$

$$\text{Sum of the products} = 32 + 0 + 8 + 0 + 0 + 1 = 41$$

$$\text{Therefore, } (101001)_2 = (41)_{10}$$

3. Two symptoms of an infected computer are:

a. Start displaying unusual messages on the screen.

b. Load the programs late.

4. Indian laws and government initiatives that enforce cybersecurity are:

a. Information and Technology Act, 2000

This act is also known as the Indian Cyber Act. It provides legal recognition to all e-transactions and aims to protect online privacy and curb online crimes.

b. Information Technology Amendment Act, 2008

This law aims to protect data privacy and information security. It validates digital signatures and contracts. According to this act, the owner of a given IP address will be held responsible for the content accessed or distributed through it.

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It is a policy in India that aims to protect public and private infrastructure from cyber-attacks and safeguards personal, financial, and banking information.

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6. When performing calculations using a formula, Excel follows certain rules of precedence:

a. Excel calculates expressions within parentheses '(' , ')' first.

b. Excel calculates multiplication and division before addition and subtraction.

c. Excel calculates consecutive operators with the same level of precedence from left to right.



7. Database and DBMS—An Introduction

LET'S CATCH UP



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- Step 1:** Click on the **Create** tab.
- Step 2:** Click on the **Table** command.
- Step 3:** Click on the **Fields** tab.
- Step 4:** Click on the **View** command.
- Step 5:** Select the **Design View** option.
- Step 6:** Enter the name for your table in the **Table Name** text box.
- Step 7:** Click on the **OK** button.

Exercise

Section A (Objective)

- A.** 1. d 2. a 3. b 4. c 5. d
- B.** 1. Form 2. Fields 3. Primary 4. Sorting 5. Navigation
- C.** 1. T 2. F 3. F 4. F

Section B (Subjective)

- A.** 1. Steps to add record in Database are:
- Step 1:** Double-click to open table in Datasheet view.
- Step 2:** Click on the field to add the new record.
- Steps to delete a record are:
- Step 1:** Select the record that you want to delete.
- Step 2:** Right-click and select the Delete Record option.
2. Four data types in Access are:
- 1.Text 2. Memo 3. Number 4. AutoNumber
3. a. Primary Key is a unique field by which the records are uniquely identified in a table.
- b. The final result of the manipulated data that comes from tables or queries in DBMS is known as a report.
- c. A query is the most powerful object of database. It helps us to retrieve information from a table based on some criteria or condition.
- d. A form is a database object used to create a user interface to enter or update a record in a table that is connected to it.



- B.** 1. Advantages of the Database Management System are:
- It minimizes the duplication of data by integrating and sharing the data files.
 - It saves the storage space.
 - All the users are provided with some access rights or privileges and permissions.
 - The files can be easily updated whenever any changes are being made.
2. There are two types of views in Access: Datasheet view and Design view.

Datasheet View

Datasheet view is the default view of the table. It shows all the fields and the records as entered by the user. In this view, you can edit the content of the table.

Design View

In the Design view, the records are not visible. You can only see the field names along with their data types. You can add or delete a field name. The Design view window is divided into two parts:

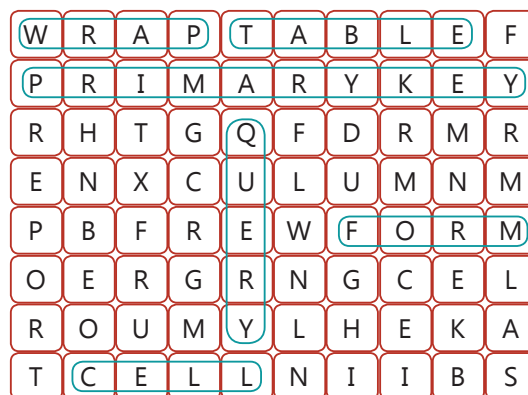
- **Field Grid Pane:** It is used to define the field names and their data types.
 - **Field Properties Pane:** It is used to set the properties for the fields defined in the table.
3. Following are the rules we should remember while writing field names:
- Field name can be up to 64 characters long.
 - Field name can include any combination of letters, numbers, spaces, and special characters except a period (.), an exclamation mark (!), an accent grave (') and brackets ([]).
 - Field name cannot begin with the leading spaces.
 - Field name cannot include a double quotation mark (").

C. Competency-based/Application-based questions:

Ranjeet can use sorting feature.



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8. More on Access

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1. Field is the first row of the design grid that displays the selected field names from the table.
2. Sort displays the data in either descending or ascending order during the run time.
3. Table displays the names of the existing tables in the relationship window.
4. Or is used to set multiple conditions in a query.

Exercise

Section A (Objective)

- A.** 1. b 2. b 3. c 4. c
- B.** 1. Logo, Title 2. Select query
3. **(This question was printed incorrectly in the book, please correct it in your textbook)**
- Questions.** The _____ key field must match with the primary key field in the first table.
- Ans.** foreign
4. Run
- C.** 1. F
2. **(This question was printed incorrectly in the book, please correct it in your textbook)**
- Question.** Split form shows one part.
- Ans.** F
3. T 4. T 5. T
- D.** 1. c 2. a 3. d 4. b

Section B (Subjective)

- A.** 1. A form is a database object used to add, edit and display data from a table in a user-friendly manner.
2. The two types of queries in Access are:
- a. **Select Query:** It retrieves data from one or more tables. It displays the record in a datasheet, allowing users to group data and calculate sum, count, average, etc.
 - b. **Parameter Query:** It is a type of select query that prompts you for the input before it runs. It uses the input as the criteria that controls the result.
3. The three main views in which a form can be displayed are: Form view, Design view and Layout view.
- B.** 1. A query is the most important object provided by Access that can give us information that we might not be able to find by looking at the table directly. A report in Access is a feature which



allows us to organise and present our data in a user-friendly format so that it can be printed.

2. To create a report, follow these steps:

Step 1: Click on the Create tab.

Step 2: Open the desired table for which you want to create a report.

Step 3: Click on the Report command.

The report of the table, which is open, will be created.

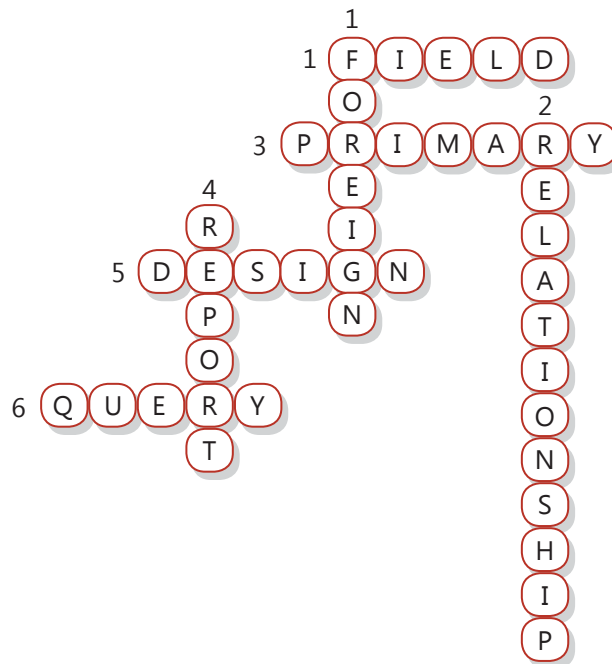
3. Four parameters of the design grid in the bottom part of the Query window are:
 - a. Field: It is the first row of the design grid that displays the selected field names from the table.
 - b. Table: It displays the names of the existing tables in the relationship window.
 - c. Sort: It displays the data in either descending or ascending order during the run time.
 - d. Show: This means that the field with the checkmark will be displayed in the result, and the fields with an uncheck mark will not be displayed when the query runs.

C. Competency-based/Application-based questions:

1. Form
2. Crosstab Query
3. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A)



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9. Lists and Tables in HTML

LET'S CATCH UP



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An ordered list is also called the numbered list. This type of list is used to display the items in a sequential manner.

An unordered list is also called bulleted list. This type of list is generally used to display random items which never require to place in a sequential manner.

LET'S CATCH UP



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1. BORDER
2. BORDERCOLOR
3. FRAMES
4. BGCOLOR

Exercise

Section A (Objective)

- | | | | | | |
|-----------|-----------------|--------------|---------|---------|------|
| A. | 1. c | 2. a | 3. c | 4. d | 5. b |
| B. | 1. ordered list | 2. list item | 3. | 4. disc | |
| | 5. <CAPTION> | | | | |
| C. | 1. T | 2. F | 3. T | 4. F | 5. F |

Section B (Subjective)

- A.**
1. A list is a collection of related items.
 2. Tables represent the data in the form of rows and columns.
 3. Description list is a type of list in which description of each term is defined.
- B.**
1. An ordered list is also called the numbered list. This type of list is used to display the items in a sequential manner. tag is used to create an ordered list.
An unordered list is also called bulleted list. This type of list is generally used to display random items which never require to place in a sequential manner. The tag is used to define an unordered list.
 2. Four attributes of the <Table> tag are: BORDER, BORDERCOLOR, FRAMES & BACKGROUND.
 3. The ROWSPAN attribute applies when a single cell is extended for more than a single row; that is the cell spans for 2 or more rows instead of 1, whereas the COLSPAN attribute applies



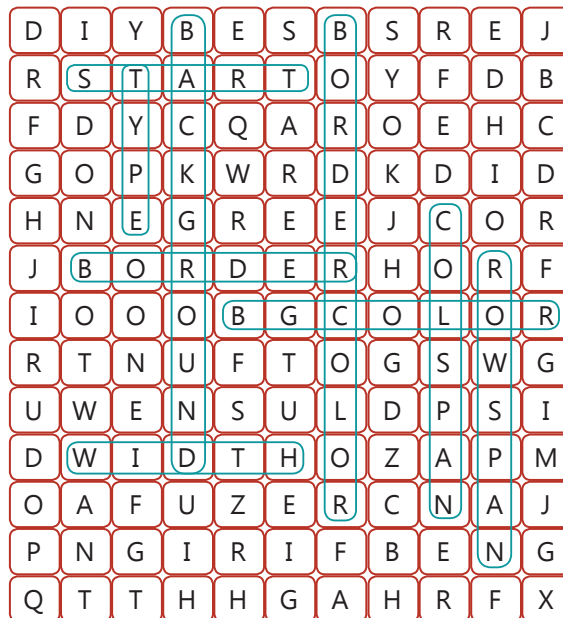
when a single cell is extended to more than a single column; that is the cell spans for 2 or more columns instead of 1.

C. Competency-based/Application-based questions:

1. tag
2. tag
3. <COLSPAN> attribute



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10. More on HTML

Let's Catch Up



(Page 130)

- **Internal linking:** The process of linking a particular section of the same web page or linking one web page to another web page of the same website is called internal linking. In this case, the hyperlink and the linked section appears on the same website.
- **External linking:** The process of linking a web page of one website to another website is called external linking.



Exercise

Section A (Objective)

- A.** 1. c 2. b 3. b 4. c 5. c
6. c 7. a 8. d
- B.** 1. **(This question was printed incorrectly in the book, please correct it in your textbook)**
Question. The process of linking a particular section of the same web page or linking one web page to another web page of the same website is called _____.
Ans. internal linking
2. <A> 3. Direction 4. <FRAMESET> 5. <SELECT>
- C.** 1. F 2. F 3. F 4. T 5. T

Section B (Subjective)

- A.** 1. HREF stands for Hypertext Reference.
2. ALINK attribute is used to set the color of the active link.
3. Frames is a feature which is used to display more than one web page on a single screen of the web browser.
4. BORDER attribute specifies the thickness of the border surrounding the image.
5. ROWS attribute is used to divide the window into horizontal sections.
- B.** 1. a. SCROLLAMOUNT indicates the speed of the moving object.
The SCROLLAMOUNT = 1 means the slowest moving object.
b. HREF stands for Hypertext Reference. It takes the URL of the web page which we want to link when we create external linking.
c. ALT specifies the alternate text to be displayed in the web browser, if the provided image is not found. For example,

2. SRC specifies the source or URL of the image that has to be inserted in the web page. For example,
WIDTH specifies the width of the image in the web page. For example,

3. Display
4. The various attributes used with the <FRAME> tag are:
FRAMEBORDER: This attribute is used to define whether a border is to be created around the frame or not. The value taken by the attribute is 0 in case no border is to be shown and 1 in case a border is to be shown. For example,




```
<FRAME FRAMEBORDER="0">
```

NORESIZE: This attribute is used to restrict the user to resize the frame on the web page. For example,

```
<FRAME NORESIZE>
```

SRC: This attribute is used to define the URL or path of the web page which is to be linked to the frame. For example,

```
<FRAME SRC="frames.html">
```

5. The two attributes of <INPUT> tag are as follows:

- i. TYPE: This attribute is used to specify the type of field we want to create. It takes one of the predefined values.
- ii. NAME: This attribute is used to specify the identity of the field on the web page.

```
<INPUT TYPE="VALUE" NAME="VALUE" VALUE "ABC">
```

Let us create a web page containing a login form to accept the user name and password from the user. The code to create the Form.html is as follows:

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> Login Form </TITLE>
```

```
</HEAD>
```

```
<BODY BGCOLOR="lightyellow">
```

```
<FORM>
```

```
User Name: <INPUT TYPE="TEXT" NAME="USER NAME"> <BR>
```

```
Password: <INPUT TYPE="PASSWORD" NAME="PASSWORD"><BR>
```

```
<INPUT TYPE="CHECKBOX"> Remember me next time
```

```
<BR>
```

```
<INPUT TYPE="BUTTON" VALUE="Log IN">
```

```
</FORM>
```

```
</BODY>
```

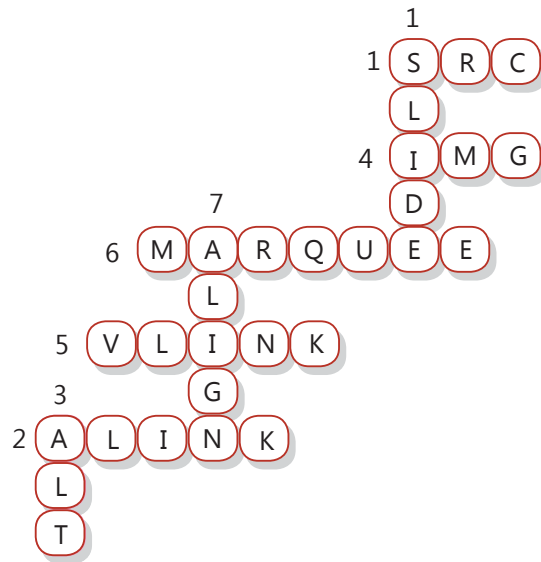
```
</HTML>
```

C. Competency-based/Application-based questions:

1. <FRAME> Tag
2. Yes, he can do this by using the <MARQUEE> tag.
3. tag



Crack The Code



WORKSHEET 2

(Based on chapter 7 to 10)

- A.**
1. A collection of programs required to store and retrieve data from a database is called Database Management System (DBMS).
 2. A form is a collection of different types of fields to take the input from the user on a web page.
 3. The process of linking a particular section of the same web page or linking one web page to another web page of the same website is called internal linking.
- B.**
1. c
 2. a
 3. d
 4. b
- C.**
1. Field
 2. Sort
 3. Layout view
 4. Select query
 5. Or



D.

```
<html>
<body bgcolor = "red">
<h1> Venus </h1>
<hr>
<p> Venus is the second planet from the Sun. It
is named after the Roman goddess of love and
beauty. As the second-brightest natural object
in the night sky after the Moon, Venus can cast
shadows and can be, on rare occasion, visible
to the naked eye in broad daylight. Venus does
not have any moons, a distinction it shares only
with Mercury among planets in the Solar System.
System.
</p>
<hr>
</body>
</html>
```

Test Sheet 2

(Based on chapter 7 to 10)

Section A

- A.** 1. c 2. d 3. b 4. c 5. a
6. d 7. c 8. c
- B.** 1. Form 2. Select query 3. ordered list 4. list item 5. <FRAMESET>
6. <SELECT>
- C.** 1. F 2. T 3. F 4. F 5. F 6. F

Section B

- A.** 1. Steps to add record in Database are:
Step 1: Double-click to open table in Datasheet view.
Step 2: Click on the field to add the new record.
Steps to delete a record are:
Step 1: Select the record that you want to delete.
Step 2: Right-click and select the Delete Record option.



2. The three main views in which a form can be displayed are: Form view, Design view and Layout view.
 3. Description list is a type of list in which description of each term is defined.
 4. Frames is a feature which is used to display more than one web page on a single screen of the web browser.
 5. Border attribute specifies the thickness of the border surrounding the image.
 6.
 - a. Primary Key is a unique field by which the records are uniquely identified in a table.
 - b. The final result of the manipulated data that comes from tables or queries in DBMS is known as a report.
 - c. A query is the most powerful object of database. It helps us to retrieve information from a table based on some criteria or condition.
 - d. A form is a database object used to create a user interface to enter or update a record in a table that is connected to it.
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Datasheet View

Datasheet view is the default view of the table. It shows all the fields and the records as entered by the user. In this view, you can edit the content of the table.

Design View

In the Design view, the records are not visible. You can only see the field names along with their data types. You can add or delete a field name. The Design view window is divided into two parts:

- **Field Grid Pane:** It is used to define the field names and their data types.
 - **Field Properties Pane:** It is used to set the properties for the fields defined in the table.
2. Four parameters of the design grid in the bottom part of the Query window are:
 - a. **Field:** It is the first row of the design grid that displays the selected field names from the table.
 - b. **Table:** It displays the names of the existing tables in the relationship window.
 - c. **Sort:** It displays the data in either descending or ascending order during the run time.
 - d. **Show:** This means that the field with the checkmark will be displayed in the result, and the fields with an uncheck mark will not be displayed when the query runs.
 3. The ROWSPAN attribute applies when a single cell is extended for more than a single row; that is the cell spans for 2 or more rows instead of 1, whereas the COLSPAN attribute applies when a single cell is extended to more than a single column; that is the cell spans for 2 or more columns instead of 1.

4. The two attributes of <INPUT> tag are as follows:

i. **TYPE:** This attribute is used to specify the type of field we want to create. It takes one of the predefined values.

ii. **NAME:** This attribute is used to specify the identity of the field on the web page.

```
<INPUT TYPE="VALUE" NAME="VALUE" VALUE "ABC">
```

Let us create a web page containing a login form to accept the user name and password from the user. The code to create the Form.html is as follows:

```
<HTML>
<HEAD>
<TITLE> Login Form </TITLE>
</HEAD>
<BODY BGCOLOR="lightyellow">
<FORM>
User Name:<INPUT TYPE="TEXT" NAME="USER NAME"> <BR>
Password:<INPUT TYPE="PASSWORD" NAME="PASSWORD"><BR>
<INPUT TYPE="CHECKBOX"> Remember me next time
<BR>
<INPUT TYPE="BUTTON" VALUE="Log IN">
</FORM>
</BODY>
</HTML>
```

5. Display

6. The various attributes used with the <FRAME> tag are:

FRAMEBORDER: This attribute is used to define whether a border is to be created around the frame or not. The value taken by the attribute is 0 in case no border is to be shown and 1 in case a border is to be shown. For example,

```
<FRAME FRAMEBORDER="0">
```

NORESIZE: This attribute is used to restrict the user to resize the frame on the web page. For example,

```
<FRAME NORESIZE>
```

SRC: This attribute is used to define the URL or path of the web page which is to be linked to the frame. For example,

```
<FRAME SRC="frames.html">
```