Total Questions: 40   **Total Marks:** 40   **Time:** 1 hour

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- All questions are compulsory.

- Read the instructions on the **ANSWER SHEET** and fill in your **NAME**, **CLASS** and **OTHER INFORMATION**.

- To mark your choice of answer by darkening the circles in the **ANSWER SHEET**, use a **BLUE/BLACK BALLPEN** only.

- You **MUST** record your answers on the **ANSWER SHEET** only.

- There are **40 MULTIPLE CHOICE QUESTIONS**. Use the information provided to choose the **BEST** possible answer among the four options. On your **ANSWER SHEET** fill in the circle that matches your answer.

- $\frac{1}{2}$ **MARK** will be deducted for every **WRONG ANSWER**.

- Return the **ANSWER SHEET** to the invigilator at the end of the examination.

- You are **NOT** allowed to use a calculator. You may use a ruler and spare paper for rough work.

This question paper contains a total of 40 questions divided into three sections - A, B and C.

Read the instructions carefully before attempting these questions.

Section A (Logical Reasoning)

1. Arrange the following words in a meaningful sequence: Birth, Death, Childhood, Infancy, Adolescence.
   - (A) Infancy, Childhood, Adolescence, Birth, Death
   - (B) Birth, Infancy, Childhood, Adolescence, Death
   - (C) Childhood, Birth, Adolescence, Infancy, Death
   - (D) Birth, Childhood, Adolescence, Infancy, Death

2. A train traveling at a speed of 74 km/h overtakes a man walking at 8 km/h in the same direction in 30 seconds. Determine the length (approx.) of the train.
   - (A) 500m
   - (B) 525m
   - (C) 545m
   - (D) 550m

3. Choose the suitable images from the following option to complete the matrix:

   (A)

   (B)

   (C)

   (D)
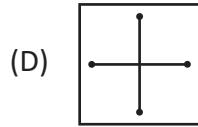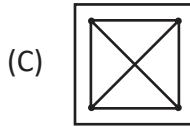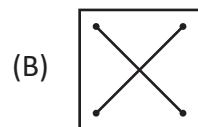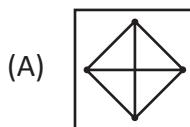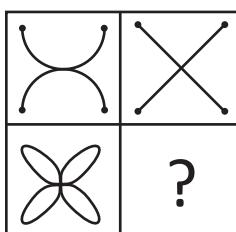
4. What will come next in the series: A, D, I, P, ___?
   - (A) H
   - (B) Z
   - (C) J
   - (D) Y

5. Choose the water image for the given image from the following options:

   (A)

   (B)

   (C)

   (D)

CYBER
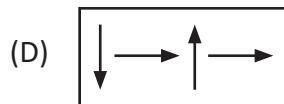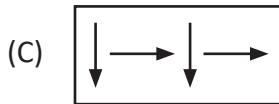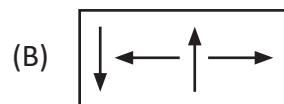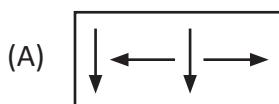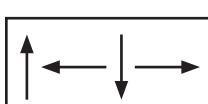
6. Select the best alternative.

   Tehran: Iran :: Beijing : ___?___

   (A) China
   (B) Japan

   (C) Turkey
   (D) Malaysia

7. If CUP = 40, then KITE = ?

   (A) 10
   (B) 20

   (C) 30
   (D) 45

8. Which of the following fulfil the place of question mark?

2601		729
	51	27
	40	35
1600		?
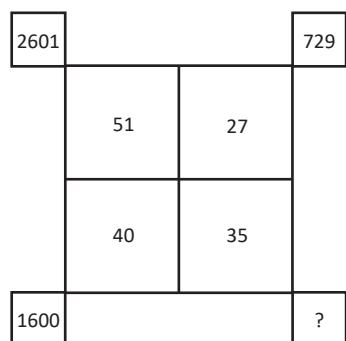
   (A) 1325
   (B) 1225

   (C) 1235
   (D) 1435

Section B (Subject Specific)

9. Which protocol is used for secure data transfer over the web?

   (A) HTTP
   (B) HTTPS

   (C) FTP
   (D) SMTP

10. What type of data source is commonly used with Mail Merge in Word?

    (A) Excel Spreadsheet
    (B) Access Database

    (C) Outlook Contacts
    (D) All of these

11. When you increase the image resolution in Photoshop, what happens to the file size?

    (A) It decreases significantly
    (B) It remains the same

    (C) It increases
    (D) It becomes corrupted

12. What does the Rehearse Timings feature allow you to do?

    (A) Record audio for the presentation

    (B) Set how long each slide shows during the Slide Show

    (C) Adjust the animation speed

    (D) Create notes for each slide

13. In which view can you see a miniature version of all slides?

(A) Slide Sorter View
(B) Normal View
(C) Outline View
(D) Notes Page View

14. The function =LEN("Hello") will return:

(A) 6
(B) 5
(C) 4
(D) 3

15. In Adobe Animate, what is the default frame rate for animations?

(A) 15 fps
(B) 30 fps
(C) 24 fps
(D) 60 fps

16. Which of the following is used to group records in SQL?

(A) GROUP BY
(B) ORDER BY
(C) WHERE
(D) HAVING

17. In HTML5, which attribute is used in the <form> element to specify where to send the form-data when the form is submitted?

(A) Action
(B) Method
(C) Submit
(D) Target

18. Which type of firewall filters traffic based on predetermined rules?

(A) Proxy firewall
(B) Packet-filtering firewall
(C) Stateful inspection firewall
(D) All of these

19. Given the pseudocode below, identify the output if num is set to 5:

IF num > 3 THEN
    PRINT "Greater"
ELSE
    PRINT "Smaller"
END IF

(A) Smaller
(B) Greater
(C) No output
(D) Error in code

20. What is the meaning of the term "machine learning" in AI?

(A) Implementing precise instructions into machines through programming
(B) Conceptualising hardware components for Artificial Intelligence systems
(C) Developing algorithms to control robotic motion
(D) Teaching machines to execute tasks automatically

21. What is the role of sensors in robotics?

    (A) Controlling actuators

    (B) Processing data

    (C) Providing feedback about the environment

    (D) Generating code for AI algorithms

22. Which protocol is used by email clients to retrieve messages from a mail server?

    (A) SMTP   (B) POP3

    (C) FTP   (D) HTTP

23. What is the shortcut key to access the Header/Footer editing section in Word?

    (A) Ctrl + H   (B) Alt + N, H

    (C) Ctrl + Shift + H   (D) Alt + Shift + N

24. Which of the following is a common method used by hackers to gain access to email accounts?

    (A) Phishing attacks   (B) Strong passwords

    (C) Encryption   (D) Two-factor authentication

25. Which of the following is not a type of database relationship?

    (A) One-to-One   (B) One-to-Many

    (C) Many-to-Many   (D) Few-to-Several

26. Which concept is essential in AI for machines to make predictions?

    (A) Data analytics   (B) Pattern recognition

    (C) Hardware efficiency   (D) Cloud computing

27. What will the following SQL statement return?

    SELECT name FROM Students ORDER BY name DESC;

    (A) Names in alphabetical order   (B) Random names

    (C) Names sorted by age   (D) Names in reverse alphabetical order

28. What is the main purpose of a privacy policy?

    (A) To promote products   (B) To inform users about data practices

    (C) To enhance website design   (D) To increase website traffic

Instruction: Q. 29 to 33 are two-key based questions having four options A, B, C and D out of which TWO are correct.

29. Which clauses are used to filter results in SQL?

    (A) WHERE   (B) HAVING

    (C) ORDER BY   (D) GROUP BY

30. Which functions are used for lookup operations in rows or columns?

    (A) HLOOKUP
    (B) SUM
    (C) COUNTIF
    (D) VLOOKUP

31. The attributes of <INPUT> tag are?

    (A) Value
    (B) Size
    (C) bgcolor
    (D) Img

32. What is the primary benefit of using robots in manufacturing?

    (A) Increased precision
    (B) Lower labour costs
    (C) Enhanced creativity
    (D) Reduced resource usage

33. Which of the following describe features of Virtual Reality (VR)?

    (A) Immersive experience
    (B) Interaction with the real world
    (C) Simulation of environments
    (D) Augmented overlays

Section C (Competency Enhancement)

34. A company's network topology uses a combination of star and bus topologies. What is this type of topology called?

    (A) Hybrid topology
    (B) Mesh topology
    (C) Tree topology
    (D) Ring topology

35. A manufacturing company wants to automate its assembly line to increase efficiency and reduce errors in product assembly. They need machines that can handle repetitive tasks such as welding, painting, and packaging. Which technology should they adopt?

    (A) Augmented Reality (AR)
    (B) Data Science
    (C) Robotics
    (D) 3D Printing

36. Ashish was extremely happy when he received a mail that he has won a lottery of Rs. 10,00,000. He told this good news to his friend Rahul. Rahul explained him that it is a fraud. Which of the options given below are a trick to hack your computer or steal important information from it?

    (A) Free unauthorised software
    (B) Secret investment opportunity
    (C) Suddenly winning a big lottery
    (D) All of these

37. Tanmay is confused about the output of the following question. Help him find the output.

    x = 8

    y = 5

    print(x+y)

    (A) 13
    (B) 10
    (C) 85
    (D) None of these

38. While editing a photo, you notice a blemish on the subject's face. Which tool is most suitable for retouching?

(A) Crop Tool

(B) Healing Brush Tool

(C) Text Tool

(D) Lasso Tool

39. A company's database has a Products table with columns ProductID, ProductName, Price, and Category. The manager wants to see the average price of all products in the 'Electronics' category. What SQL query should the manager use to calculate the average price of products in the 'Electronics' category?

(A) SELECT AVG(Price) FROM Products WHERE Category = 'Electronics';

(B) SELECT COUNT(Price) FROM Products WHERE Category = 'Electronics';

(C) SELECT ProductName, AVG(Price) FROM Products WHERE Category = 'Electronics';

(D) SELECT Price FROM Products WHERE Category = 'Electronics';

40. In a flowchart for a cooking recipe, what shape would you use to indicate input from the user, such as the ingredient list?

(A) Rectangle

(B) Parallelogram

(C) Diamond

(D) Arrow