SECTION : PHYSICS

This section contains **9 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

1. A student walks 8 m towards the east, then 6 m towards the north. What is the magnitude of the displacement?
(1) 14 m
(2) 10 m
(3) 2 m
(4) 48 m

2. A student places an opaque object between a torch and a screen. If the object is moved closer to the torch, what generally happens to its shadow on the screen?
(1) The shadow becomes smaller
(2) The shadow becomes larger
(3) The shadow disappears
(4) The shadow remains exactly the same size

3. A water bottle contains 750 mL of water. How many such bottles are needed to fill a container of capacity 6 litres?
(1) 6
(2) 7
(3) 8
(4) 9

4. A bar magnet is broken into two equal pieces. What will happen to the pieces?
(1) One piece will have only a north pole and the other only a south pole
(2) Both pieces will become non-magnetic
(3) Each piece will have its own north and south poles
(4) Only one piece will remain magnetic

5. A boy completes one full round of a circular track of circumference 400 m. Which of the following is correct?
(1) Distance = 0 m, Displacement = 400 m
(2) Distance = 400 m, Displacement = 400 m
(3) Distance = 400 m, Displacement = 0 m
(4) Distance = 0 m, Displacement = 0 m

6. Which of the following objects allows light to pass through it but does not allow us to see objects clearly through it?
(1) Clear glass
(2) Wooden board
(3) Butter paper
(4) Clean water

7. A ribbon is 3 m 45 cm long. Another ribbon is 275 cm long. What is their combined length?
(1) 5 m 20 cm
(2) 6 m 20 cm
(3) 6 m 70 cm
(4) 5 m 70 cm

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8. A freely suspended bar magnet always comes to rest approximately in which direction?
(1) East-West
(2) North-South
(3) North-East
(4) South-West

9. A magnet attracts an iron nail. The nail is then brought near another iron nail. The second nail also gets attracted. This phenomenon is an example of:
(1) Magnetic induction
(2) Reflection
(3) Friction
(4) Electrical conduction

SECTION : CHEMISTRY

This section contains **9 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

10. Which statement is true for a liquid?
(A) It has a fixed shape and a fixed volume
(B) It has no fixed shape but has a fixed volume
(C) It has no fixed shape and no fixed volume
(D) It has a fixed shape but no fixed volume

11. Water kept in an ice tray inside a freezer turns into ice. This change of state is called:
(A) Melting
(B) Evaporation
(C) Freezing
(D) Condensation

12. Which of the following helps in conserving water?
(A) Leaving the tap open while brushing teeth
(B) Washing a car daily with a hose pipe
(C) Repairing leaking taps
(D) Throwing waste into rivers

13. Why is water boiled before drinking?
(A) To remove sand and mud
(B) To kill harmful germs
(C) To make it colder
(D) To add taste to it

14. Which of the following is a chemical change?
(A) Breaking a glass
(B) Cutting vegetables
(C) Cooking an egg
(D) Melting butter

15. A sheet of paper is folded into a boat and then unfolded to get the sheet back. This change is:
(A) Reversible and physical
(B) Irreversible and chemical
(C) Reversible and chemical
(D) Irreversible and physical

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16. Which set contains only materials that do NOT dissolve in water?
(A) Sugar and salt
(B) Sand and chalk powder
(C) Salt and sand
(D) Sugar and sand

17. An aluminium foil looks shiny, while a wooden stick looks dull. Which property of materials is being compared?
(A) Lustre
(B) Hardness
(C) Solubility
(D) Transparency

18. Water droplets appear on the outer surface of a glass of cold water. These droplets come from:
(A) Water leaking through the glass
(B) Water vapour in the air that condenses
(C) Water that evaporates from the glass
(D) Melting of the glass

SECTION : MATHEMATICS

This section contains **9 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

19. What is the place value of the digit 7 in the number 45,782?
(A) 7
(B) 70
(C) 700
(D) 7,000

20. Which of the following is the smallest prime number?
(A) 0
(B) 1
(C) 2
(D) 3

21. Which fraction is equivalent to 3/4?
(A) 6/8
(B) 5/8
(C) 9/16
(D) 4/3

22. Solve: 2/5 + 1/5 = ?
(A) 3/10
(B) 3/5
(C) 2/25
(D) 1/5

23. What is the value of x in the equation x + 5 = 12?
(A) 5
(B) 6
(C) 7
(D) 17

24. If 3y = 15, what is the value of y?
(A) 3
(B) 5
(C) 12
(D) 45

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25. An angle whose measure is exactly 90° is called a:

(A) Acute angle
(B) Obtuse angle
(C) Right angle
(D) Straight angle

26. If two lines meet at a common point, they are called:

(A) Parallel lines
(B) Intersecting lines
(C) Perpendicular lines only
(D) Concurrent lines

27. What is the perimeter of a square with a side length of 6 cm?

(A) 12 cm
(B) 18 cm
(C) 24 cm
(D) 36 cm

SECTION : BIOLOGY

This section contains **9 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

28. When you tie soaked chana (chickpeas) in a damp cloth, they sprout faster than if left in a bowl of water. Why?
a) The cloth absorbs harmful chemicals from the seeds
b) The cloth allows the seeds to get both moisture and air
c) The cloth protects them from sunlight
d) The cloth provides extra heat

29. If you open a soaked seed, you will find fleshy seed leaves inside that provide food for the baby plant until it can grow its own leaves. What are these called?
a) Cotyledons
b) Seed coats
c) Roots
d) Stems

30. Dr. Beaumont made a famous discovery by observing a patient with a hole in his stomach. He found that the digestive juices inside the stomach are:
a) Highly basic and soapy
b) Highly acidic
c) Purely water-based
d) Neutral like milk

31. Why is it important to chew our food slowly and thoroughly before swallowing?
a) It exercises our jaw muscles to make them stronger
b) It makes the food last longer so we eat less
c) It breaks food into smaller pieces, mixing it with saliva for better digestion
d) It cools the food down so it doesn't burn the stomach

32. If you accidentally drop sugar on the floor, ants find it very quickly. How do they communicate the location of the sugar to other ants?
a) They make high-pitched sounds
b) They carry the sugar back and visually show the way
c) They perform a specific dance
d) They leave a chemical trail of smell (pheromones) for others to follow

33. Why do birds like pigeons and crows frequently move their necks around while looking at things?
a) Their neck muscles are very weak
b) Their eyes are fixed and cannot move,

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so they must turn their whole head
c) It helps them hear better
d) It is a warning signal to other birds

34. How does a langur on a high tree warn others of dangers like a tiger or leopard approaching?
a) By making a special warning call
b) By throwing branches down
c) By changing its fur color
d) By leaving a specific scent

35. What is the fundamental difference between breathing and respiration?
a) Breathing is taking in air; respiration is the chemical breakdown of food to release energy
b) Breathing happens only in animals; respiration happens only in plants
c) Breathing is for oxygen; respiration is for carbon dioxide
d) There is no difference; they are the exact same process

36. If you touch the leaves of a "Touch-me-not" (Mimosa) plant, they instantly fold up. This behavior is an example of which characteristic of living things?
a) Excretion
b) Respiration
c) Response to a stimulus
d) Reproduction

SECTION : IQ

This section contains **9 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

37. If + means ×, × means −, − means ÷ and ÷ means +, what is the value of the following expression?
$18 - 3 + 4 \times 5 \div 2$
(1) 19
(2) 21
(3) 24
(4) 27

38. If the letters of the word BRIGHT are arranged in alphabetical order, how many letters will retain their original positions?
(1) One
(2) Two
(3) Three
(4) Four

39. In a certain code, PLANET is written as QNDRJY. Following the same pattern, how will ROCKET be written?
(1) SQFNGY
(2) SQFNFY
(3) TQFNGZ
(4) SQDMGY

40. Find the missing number:
3, 8, 18, 38, 78, ?
(1) 148
(2) 156
(3) 158
(4) 160

41. Thermometer : Temperature :: Barometer : ?
(1) Humidity
(2) Wind speed
(3) Atmospheric pressure
(4) Rainfall

42. Five students P, Q, R, S and T are sitting in a row facing north. P is immediately to the left of Q. R is

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immediately to the right of Q. S is at the extreme left. T is not adjacent to S. Who sits in the middle?
(1) P
(2) Q
(3) R
(4) T

43. Which relationship best represents Doctors, Women and Mothers?
(1) All three groups are completely separate.
(2) All mothers are women, some women are doctors, and some doctors may be mothers.
(3) All doctors are mothers.
(4) All women are doctors.

44. In a queue, A is 18th from the front and 25th from the back. How many people are in the queue?
(1) 41
(2) 42
(3) 43
(4) 44

45. Pointing to a photograph, Arun says, "She is the daughter of the only son of my grandfather." How is the girl related to Arun, assuming Arun's father is the only son of his grandfather?
(1) Sister
(2) Cousin
(3) Aunt
(4) Niece

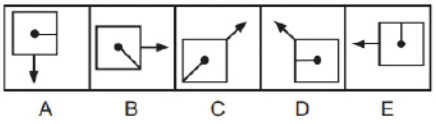
46. Study the sequence:
A 3 C 6 E 9 G 12 I 15 K 18
Which element is seventh to the right of the second number in the sequence?
(1) G
(2) 12
(3) I
(4) 15

47. A person walks 8 km north, turns right and walks 6 km, then turns right and walks 8 km. How far and in which direction is the person from the starting point?
(1) 6 km east
(2) 6 km west
(3) 8 km east
(4) 14 km south

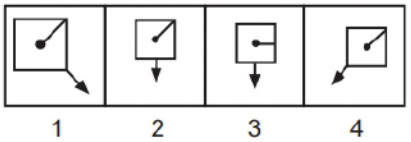
48. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series
6, 12, 24, 48, ?, 192
(1) 72
(2) 81
(3) 64
(4) 96

49. The question consists of five figures marked A, B, C, D and E called the Problem Figures followed by four other figures marked 1, 2, 3, 4 called the Answer Figures. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures

Problem Figures



Answer figures



(1) 1
(2) 2
(3) 3
(4) 4

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50. A clock shows 3:40. What time will appear in its mirror image?
(1) 8:20
(2) 9:20
(3) 8:40
(4) 9:40

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