2025
ANNUAL COMPETITION
CLASS-IX
Time Allowed: 2 (Two) hours

INSTRUCTIONS*:*
This booklet contains 60 questions. Each question comprises four possible answers. Select ONLY ONE answer which you consider the best and mark it on the answer sheet. All questions carry equal marks.

Section A (English)

1. Choose the word that is most similar in meaning to "COMMENCE"

   (A) FINISH (B) START
   (C) STOP (D) DELAY

2. The antonym of the word TRUTHFUL is

   (A) HONEST (B) SINCERE
   (C) FALSE (D) ACCURATE

3. Change into passive voice: *Who broke the window?*

   (A) By whom was the window broken? (B) By whom is the window broken?
   (C) By whom has the window been broken? (D) By whom did the window be broken?

4. Convert the following direct sentence into an indirect sentence:
   Direct*: The doctor said to the patient, "Stop smoking."*

   (A) The doctor told the patient to stop smoking. (B) The doctor said to the patient that he should stop smoking.
   (C) The doctor requested the patient to stop smoking. (D) The doctor advised the patient to stop smoking.

Fill in the blanks with appropriate options (Q 5-Q8)

5. *He is interested _____ learning new languages.*

   (A) on (B) in
   (C) about (D) with

6. *The accident happened _____ the corner of the street.*

(A) in (B) on

(C) by (D) at

7. *He divided the cake _____ his friends.*

(A) with (B) between

(C) among (D) to

8. *By next year, I _____ my graduation*.

(A) will complete (B) will be completing

(C) will have completed (D) None of the above

9. Which of the following is in the Past Perfect Continuous Tense?

(A) She had completed her work. (B) They were playing in the park.

(C) He had been studying all night. (D) We have been waiting for an hour.

10. Which of the following is NOT an adverb?

(A) Slowly (B) Quickly

(C) Beautiful (D) Carefully

(Read the following passage and answer the questions 11 to 15)

An obedient child is typically characterized by their willingness to listen to and follow the instructions and rules set by their parents, teachers, and other authority figures. They generally respect the boundaries established for their safety and well-being and are cooperative in carrying out tasks and responsibilities assigned to them. While obedience can reflect good manners and a sense of respect, it's often balanced with the development of independent thought and the ability to discern right from wrong, growing into a well-rounded individual who understands the importance of both guidance and self-reliance.

11. According to the paragraph, what is a primary characteristic of an obedient child?

(A) Always being silent (B) Willingness to follow instructions

(C) Never making mistakes (D) Only listening to their friends

12. The paragraph mentions that obedient children typically show:

(A) Disrespect for authority figures. (B) Disregard for established rules.

(C) Respect for boundaries. (D) Tendency to be rebellious.

13. Obedience in children is often associated with:

(A) Being isolated from others (B) Developing only one skill

(C) Good manners (D) Avoiding all responsibilities

14. The paragraph suggests that obedience should be balanced with:

(A) Complete dependence on others. (B) The development of independent thought.

(C) Ignoring all advice. (D) Constant agreement with everyone.

15. Growing into a well-rounded individual involves understanding the importance of:

(A) Only self-reliance (B) Only guidance

(C) Both guidance and self-reliance (D) Neither guidance nor self-reliance

Section B (Science)

16. Which of the following changes when a force is applied to an object?

(A) Velocity (B) Inertia

(C) Mass (D) Weight

17. An object of mass 2 kg accelerates at 3 m/s^2. What is the net force acting on it?

(A) 1.5N (B) 5N

(C) 6N (D) 10N

18. According to Newton's Second Law, force is directly proportional to

(A) Mass only (B) Product of mass and acceleration

(C) Acceleration only (D) Momentum

19. A body continues to be in its state of rest or motion unless acted upon by

(A) Acceleration (B) Inertia

(C) Force (D) Gravity

20. The acceleration produced in a body is inversely proportional to its
    (A) Force (B) Displacement
    (C) Velocity (D) Mass
21. The process in which a solid is directly converted to a vapour state is known as
    (A) vaporisation (B) solidification
    (C) condensation (D) sublimation
22. The maximum number of electrons in the third shell of an atom is
    (A) 18 (B) 2
    (C) 32 (D) 8
23. The atomic mass unit (amu) is based on
    (A) Mass of carbon-12 isotope (B) Mass of a proton
    (C) Mass of a neutron (D) Mass of an electron
24. Which of the following is a molecule made up of two identical atoms?
    (A) Water(H_2O) (B) Oxygen(O_2)
    (C) Methane (CH_4) (D) Carbon dioxide (CO_2)
25. The atomic number of an element is determined by the number of
    (A) Protons (B) Electrons
    (C) Neutrons (D) Nucleons
26. Which of the following organelles is directly involved in synthesizing plasma membrane and cell wall components?
    (A) Lysosome (B) Ribosome
    (C) Golgi apparatus (D) Endoplasmic reticulum
27. During which stage of mitosis does the nuclear membrane completely disappear?
    (A) Telophase (B) Anaphase
    (C) Metaphase (D) Prophase
28. What causes stomata to open during the day?
    (A) Water lose through osmosis from the guard cells (B) Turgidity of guard cells due to water absorption

(C) Lack of chloroplasts in supporting cells

(D) Pressure exerted by supporting cells on stomata

29. What is the function of the axon in a neuron?

(A) Receives signals from other neurons.

(B) Transmits signals away from the cell body

(C) Protects the nucleus of the neuron

(D) Supplies energy to the neuron

30. Who introduced the system of binomial nomenclature?

(A) Charles Darwin

(B) Robert Hooke

(C) Carlus Linnaeus

(D) Aristotle

Section C (Mathematics)

31. The value of $\sqrt[5]{32^3} - \left(\frac{1}{125}\right)^{-\frac{2}{3}}$ is

(A) -17

(B) -7

(C) 11

(D) 1

32. If m, n are integers and x, y are non-zero rational numbers, then which of the following is not true?

(A) $x^m \times x^n = x^{m+n}$

(B) $\frac{x^m}{x^n} = x^{m-n}$

(C) $(xy)^m = x^m y^m$

(D) $(x^m)^n = x^{m^n}$

33. The H.C.F of $16(x^2 - 3x + 2), 24(x^2 - 4x + 3)$ and $32(x^2 + 6x - 7)$ is

(A) $8(x + 1)$

(B) $32(x - 1)$

(C) $24(x - 1)$

(D) $8(x - 1)$

34. Quartic polynomial is of degree

(A) 4

(B) 3

(C) 2

(D) 1

35. Which of the following is an irrational number?

(A) $\sqrt{7}$

(B) $\sqrt{4}$

(C) $\left(2 - \sqrt{2}\right)\left(2 + \sqrt{2}\right)$

(D) $2 + 2\sqrt{3} - 2\sqrt{3}$

36. The value of x which satisfies the equation: $\left(\frac{3}{4}\right)^3 \left(\frac{4}{3}\right)^{-7} = \left(\frac{3}{4}\right)^{2x}$

(A) -2 (B) 2

(C) -5 (D) 5

37. If -1 is a zero of the polynomial $p(x) = ax^3 - x^2 + x + 4$, then the value of a is

(A) 2 (B) 1

(C) 3 (D) 0

38. A point $P(x, y)$ lies in the II quadrant. If the signs of x and y are interchanged, then it lies in the

(A) I quadrant (B) II quadrant

(C) III quadrant (D) IV quadrant

39. Ordinate of a point is negative in

(A) III and IV quadrant (B) III quadrant only

(C) II and III quadrant (D) IV quadrant only

40. The number of dimensions a surface has is

(A) 0 (B) 1

(C) 2 (D) 3

41. Which of the following is a solution of the equation $x - 2y = 4$?

(A) (0,2) (B) (2,0)

(C) (4,0) (D) (1,1)

42. The equation which represents a straight line parallel to the axis of x at a distance of 5 units from the x −axis is

(A) $x = 5$ and $x = -5$ (B) $y = 5$ and $y = -5$

(C) $x = 5$ only (D) $y = -5$ only

43. The equation of the graph which passes through the origin is

(A) $y = kx$ (B) $y = k + 2$

(C) $y + x = k + 1$ (D) $x = k - 2$

44. Which of the followings is not true?

(A) Equation of $x -$ axis is $y = 0$ (B) The graph of $x = c$ is parallel to y −axis

(C) The graph of a linear equation is a straight-line (D) The graph of y= 4 is perpendicular to x axis

45. The sum of all angles around a point is

(A) $90°$ (B) $180°$

(C) $270°$ (D) $360°$

46. If two straight lines intersect at a point, then the number of adjacent angles formed is

(A) 6 (B) 8

(C) 2 (D) 4

47. Three friends A, B and C walk away from a point in three different direction such that the path of each is equally inclined to those of the other two. The angles which their paths make with another is

(A) $120°$ (B) $60°$

(C) $90°$ (D) $180°$

48. If $a + b + c = 9$ and $ab + bc + ca = 40$, then the value of $a^2 + b^2 + c^2$ is

(A) 1 (B) 41

(C) 49 (D) 121

49. If $x^{\frac{1}{12}} = (49)^{\frac{1}{24}}$, then x is equal to

(A) 49 (B) 2

(C) 12 (D) 7

50. When $p(x) = 4x^3 - x^2 + 1$ is divided by $x + 1$, then the remainder is

(A) -3 (B) -4

(C) 3 (D) 1

51. Which one is not a primitive Pythagorean triplet?

(A) (3,4,5) (B) (5,12,13)

(C) (8,15,17) (D) (6,8,10)

52. If $x + \frac{1}{x} = \sqrt{3}$, then the value of $x^3 + \frac{1}{x^3}$ is

(A) 0 (B) $3\sqrt{3}$

(C) 3 (D) 9

53. If $x + y + z = 0$, then $(x + y)(y + z)(z + x)$ is equal to

(A) xyz (B) $x^2y^2z^2$

(C) $2xyz$ (D) $-xyz$

54. The base and hypotenuse of a right triangle are $8cm$ and $10cm$ respectively. Area of the triangle is

(A) $40cm^2$ (B) $24cm$

(C) $24cm^2$ (D) $48cm^2$

55. The decimal representation of the rational number is

(A) Always terminating (B) Either terminating or repeating

(C) Either terminating or non-repeating (D) Neither terminating nor repeating

56. A linear equation in two variables is of the form $ax + by + c = 0$, where

(A) $a = 0, c = 0$ (B) $a \neq 0, b = 0$

(C) $a = 0, b \neq 0$ (D) $a \neq 0, b \neq 0$

57. If one angle of a triangle is equal to the sum of the other two angles, then the triangle is

(A) a right triangle (B) an isosceles triangle

(C) an equilateral triangle (D) an obtuse triangle

58. We know that $\sqrt{6}$ and $\sqrt{7}$ are two irrational numbers. A rational number between $\sqrt{6}$ and $\sqrt{7}$ is

(A) 2.5 (B) No rational number exists between them

(C) 2.65 (D) 2.44

59. Which property states that $x \times (y + z) = (x \times y) + (x \times z)$?

(A) Commutative property of multiplication (B) Associative property of multiplication

(C) Distributive property (D) Identity property of multiplication

60. How many dimensions does a point have?

(A) 0 (B) 1

(C) 2 (D) 3