Time: 2 ½ Hours

E-25 [SGCC]

→ This paper is for the student going to class **8** in the yr 2025-26 (i.e. for the student presently in class **7**)

Maximum Marks: 75

READ THE FOLLOWING INSTRUCTIONS BEFORE YOU START ANSWERING

1. In addition to the question paper, you are given **OMR** Sheet.
2. Fill up all the entries on the **OMR** Sheet carefully in the space provided in BLOCK Letters only. Incomplete/ incorrect/ carelessly filled in information may disqualify your candidature.
3. Do not fold/ damage/mutilate/spoil the OMR Sheet with unnecessary markings. Do not write anything on page -2 of **OMR** Sheet as it is evaluated by computer.
4. Use **black ink** or **blue ink** ball point pen and darken the appropriate circles in the answer sheet.
5. Ensure that the question paper consists of **75** questions. If the question paper found defective or otherwise, exchange with the correct question paper.
6. The question paper consists of **75** multiple choice questions with only one correct answer and each carries **One** mark. Blacken the appropriate circle completely corresponding to the correct answer (1/2/3/4) in **OMR** sheet.
7. There is **NO** negative marking.
8. The use of rulers, set squares and compasses is allowed, but calculators, protractors and electronic gadgets are forbidden.
9. No candidate is allowed to leave the hall till the completion of the examination.

Hall ticket number :_____

Name of the candidate :_____

1. If $(\frac{1}{6}) : (2\frac{1}{3})$, $(3\frac{1}{4}x) : (1.3)$ are in proportion then x = _____.

   (1) $\frac{1}{70}$ (2) $\frac{1}{35}$ (3) $\frac{3}{70}$ (4) $\frac{2}{35}$

2. At what rate percent per annum simple interest will a sum be double itself in 8 years?

   (1) 15% (2) 14% (3) 16% (4) 12.5%

3. If $(2^6 \div 2^{-3}) \times 2^{14} = 2^x$ then the value of 'x' is

   (1) 11 (2) 17 (3) 23 (4) 14

4. Which of the rational number $\frac{-5}{16}, \frac{-13}{24}, \frac{3}{-4}, \frac{7}{-12}$ is the smallest?

   (1) $\frac{-5}{16}$ (2) $\frac{-13}{24}$ (3) $\frac{3}{-4}$ (4) $\frac{7}{-12}$

5. The area of a square and a rectangle are equal. If the side of the square is 40 cm ,and the breadth of the rectangle is 25 cm, then the length of the rectangle is

   (1) 60 cm (2) 62 cm (3) 64 cm (4) 68 cm

6. What should be added to $a^2 + ab + b^2$ to obtain $4ab + b^2$?

   (1) $4ab - b^2$ (2) $3ab - a^2$ (3) $3ab + a^2$ (4) $4ab + b^2$

7. What will be the number of edges of a solid if there are 12 vertices and 20 faces ?

   (1) 32 (2) 28 (3) 30 (4) 42

8. The number of lines of symmetry in a regular hexagon is

   (1) 12 (2) 8 (3) 10 (4) 6

9. In a Δ ABC if $2\angle A = 3\angle B = 6\angle C$. Then the value of $\angle B$ is

   (1) 30° (2) 45° (3) 60° (4) 90°

10. The radius of a circle is 10 cm and a point located at a distance of 15 cm from the centre. The greatest distance from the circle is _____ cm

    (1) 15 (2) 5 (3) 20 (4) 25

11. Two poles of 8m and 14m stand upright on a plane ground, if the distance between their tops is 10m, find the distance between their feet.

    (1) 8 m (2) 10 m (3) 12 m (4) 6 m

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12. Mohan walks 1200m due East and then 500m due North. How far is she from her starting point ?

(1) 850 m (2) 1000 m (3) 1300 m (4) 1700 m

13. $\left(2\frac{4}{5}x - 50\right) \div \frac{2}{3} = 51$ then 'x' = _____

(1) 20 (2) 25 (3) 30 (4) 35

14. One of the two adjacent angles which forms linear pair is five times the other then the angles are

(1) 15°, 75° (2) 25°, 155° (3) 30°, 150° (4) 60°, 120°

15. Number of positive factors of 528 are

(1) 8 (2) 9 (3) 20 (4) 12

16. If the area of a rectangle is 144 sq.m and the sides ratio is 4 : 9 then the sides are _____m, _____m

(1) 36, 16 (2) 12, 12 (3) 16, 9 (4) 8, 18

17. A number 430 is divided into three parts x, y, and z such that x : y : z = 2 : 3 : 5 then z – x = _____

(1) 86 (2) 129 (3) 43 (4) 215

18. 150% x = 135 then 'x' = _____

(1) 100 (2) 135 (3) 90 (4) 120

19. (0.1598 – 0.1379)1000 – 0.1 = _____

(1) 21.8 (2) 218.9 (3) 20.9 (4) 21.89

20. In which quadrilateral are the diagonals equal ?

(1) Parallelogram (2) Rhombus (3) Trapezium (4) Square

21. The mean of first 7 nonzero multiples of 7 is

(1) 35 (2) 28 (3) 21 (4) 42

22. If two parallel lines are intersected by a transversal then which of the following is true

(1) Corresponding angles are not equal (2) co-interior angles are equal

(3) Alternate interior angles are not equal (4) co-interior angles are supplementary

23. $\frac{8^{11} - 8^{10} - 8^9}{4^{15} - 4^{14} - 4^{13}}$ = _____

(1) 10 (2) 12 (3) 110 (4) 55

24. In ΔABC, AB = 5 cm, ∠B = 45° BC = 3 cm, and in ΔPQR, PQ = 3 cm, ∠Q = 45° QR = 5 cm then

(1) ΔABC ≡ ΔPQR (2) ΔABC ≡ ΔQRP (3) ΔABC ≡ ΔRQP (4) ΔACB ≡ ΔPQR

25. In ΔABC, ∠A = 55° ∠B = 65°, BA is extended to D then ∠CAD = _____

(1) 65° (2) 125° (3) 115° (4) 120°

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26. The decrease in velocity per unit time is called _____

(1) Acceleration (2) Speed (3) Retardation (4) displacement

27. An object travels 20m in 3s and then another 20m in 2s. The average speed of the object is _____

(1) 40 m/s (2) 8 m/s (3) 4 m/s (4) 50 m/s

28. The incident ray, the reflected ray and the normal lie _____

(1) in three planes (2) in two planes

(3) in one plane (4) in different planes

29. A man standing in front of a plane mirror finds his image to be at a distance of 6 metre from himself. The distance of man from the mirror is _____
(1) 6 m (2) 2 m (3) 12 m (4) 3 m

30. The image formed by a plane mirror is _____
(1) Virtual and inverted (2) Virtual and of same size
(3) Real and inverted (4) Real and of same size

31. A thermometer uses _____
(1) Water (2) Air
(3) Mercury (4) None of the above

32. Heat in a liquid is transferred by _____
(1) Conduction (2) Radiation
(3) Convection (4) Conduction and Radiation.

33. The S.I. unit of energy is _____
(1) joule (2) watt (3) newton (4) erg

34. A ball rolling on the ground possesses _____
(1) Kinetic energy (2) Potential energy
(3) No energy (4) Heat energy

35. The energy stored in an electric cell is _____
(1) Chemical energy (2) Electrical energy
(3) Heat energy (4) Mechanical energy

36. Mass = density × _____
(1) Pressure (2) Capacity (3) Volume (4) Velocity

37. A piece of paper of dimensions 1.5 m × 20 cm has area _____
(1) 30 m^2 (2) 300 cm^2 (3) 0.3 m^2 (4) 3000 m^3

38. One litre is equal to _____
(1) 1 cm^3 (2) 1 m^3 (3) 10^{-3} cm^3 (4) 10^{-3} m^3

39. The density of a substance is $0.8\,g\,cm^{-3}$. In S.I. unit it will be _____
(1) $0.8\,Kg\,m^{-3}$ (2) $0.0008\,Kg\,m^{-3}$ (3) $800\,Kg\,m^{-3}$ (4) $8\times10^{3}\,Kg\,m^{-3}$

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40. We can distinguish a shrill sound from a flat sound by its _____
    (1) Amplitude (2) Loudness (3) Quality (4) Pitch
41. A human being can hear sound of frequency _____
    (1) 10 Hz (2) 15 Hz (3) 50, 000 Hz (4) 500 Hz
42. The minimum distance required between the source and the reflector so as to hear the echo in air is _____
    (1) 10 m (2) 17 m (3) 34 m (4) 50 m
43. A boy fires a gun and another boy at a distance of 1020m hears the sound of firing the gun 3s after seeing its smoke. Then the speed of sound is _____
    (1) 340 m/s (2) 330 m/s (3) 338 m/s (4) 360 m/s

44. A freely suspended magnet rests in _____
    (1) east – west direction (2) north – east direction
    (3) north – west direction (4) north – south direction.
45. An electromagnet is used in _____
    (1) electric oven (2) ammeter
    (3) electric bell (4) radio set
46. Electricity can flow through _____
    (1) wood (2) rubber (3) plastic (4) copper wire
47. We should not touch the switch with wet hands, otherwise _____
    (1) electricity may pass through our body
    (2) electricity may not pass through the appliance
    (3) circuit may break (4) the switch may get off
48. The motion of a pendulum is _____
    (1) rotatory (2) oscillatory (3) curvilinear (4) rectilinear
49. If a body covers equal distance in equal intervals of time, the motion is said to be __
    (1) uniform (2) non-uniform (3) oscillatory (4) rotator
50. The speed of light in air is _____
    (1) 330 m/s (2) 3×10^{10} m/s (3) 5100 m/s (4) 3×10^{8} m/s
51. Physical change among the following is:
    (1) Rusting of iron (2) Burning of paper (3) Melting of ice (4) Cooking of food
52. The pH of a neutral substance is_____
    (1) 0 (2) 7 (3) 14 (4) 10
53. Mixture among the following is:
    (1) Salt (2) Air (3) Water (4) Sugar
54. The process in which a solid turns into a liquid is ____
    (1) Freezing (2) Condensation (3) Melting (4) Evaporation
55. One of the properties of metals is_____
    (1) Brittle (2) Non-conductors of heat
    (3) Malleable (4) Non-lustrous

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56. One of the following is NOT a part of an atom:
    (1) Proton (2) Neutron (3) Electron (4) Plasma
57. Non-metal among the following is:
    (1) Iron (2) Copper (3) Oxygen (4) Magnesium
58. Chemical change among the following is:
    (1) Dissolving sugar in water (2) Freezing water
    (3) Burning wood (4) Melting wax
59. Products formed when an acid reacts with a base are:
    (1) Salt and water (2) Water and oxygen
    (3) Gas and water (4) Salt and gas

60. The gas released when an acid reacts with a metal is:
(1) Hydrogen (2) Oxygen (3) Nitrogen (4) Carbon dioxide

61. Among the following is an example of a reversible change:
(1) Burning of wood (2) Melting of ice
(3) Cooking of an egg (4) Rusting of iron

62. Element among the following is:
(1) H_2O_2 (2) H_2O (3) Na (4) MgO

63. The following is NOT a property of an acid:
(1) Turn blue litmus red (2) Taste bitter
(3) Release hydrogen ions in water (4) Corrosive

64. The good conductor of electricity among the following is_____
(1) Plastic (2) Rubber (3) Copper (4) Wood

65. The property of non-metals is_____
(1) Ductile (2) Poor conductors of heat
(3) Shiny (4) Malleable

66. One among the following is used to extinguish the fire caused by oil is_____
(1) Water (2) Foam (3) Sand (4) Both (2) and (3)

67. The state of matter with a definite shape and volume is:
(1) Solid (2) Liquid (3) Gas (4) Plasma

68. The main component of natural gas is_____
(1) Methane (2) Ethanol (3) Butane (4) Propane

69. The process by which plants make their own food is called:
(1) Respiration (2) Transpiration (3) Photosynthesis (4) Digestion

70. When a solid turns directly into a gas, the process called is_____
(1) Condensation (2) Sublimation
(3) Evaporation (4) Melting

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71. True among the following about gases is_____
    (1) Gases have a definite shape (2) Gases have a definite volume
    (3) Gaseous particles are very far apart and move freely
    (4) Gaseous particles are closely packed
72. The major source of air pollution among the following is _____
    (1) Planting of trees (2) Burning of fossil fuels
    (3) Using public transport (4) Re-cycling of paper
73. An example of a solution from the following is_____
    (1) Oil and water (2) Sand and water
    (3) Salt dissolved in water (4) Ice in water

74. The characteristic property of a solution is_____

(1) A solution is always a solid. (2) A solution is always a gas.

(3) A solution has a uniform composition throughout.

(4) A solution can never be transparent.

75. The maximum amount of solute that can dissolve in a particular amount of solvent at a given temperature is called _____

(1) Saturated solution (2) Solubility

(3) Unsaturated solution (4) None of these

Paper Ends

Dear Parent,

We deem it our privilege that you have chosen our **INSTITUTE** for your child's career. You are requested to note that the results of the successful candidates will be communicated to you on **7th** of this month.

(Y. SubrahmanyaSarma)

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