



MITTAL CLASSES

IIT-JEE | MEDICAL | FOUNDATION

Paper Code:08F-SP-1

SAMPLE PAPER

Class – VIII

Time: 2 Hour

M. Marks: 300

General Instructions:

1. Answers have to be marked on the OMR sheet.
2. The question paper consists of 75 multiple choice questions (single correct option) divided into five sections.
Section – A contains 15 questions (Q1 to Q15) of Physics.
Section – B contains 15 questions (Q16 to Q30) of Chemistry.
Section – C contains 15 questions (Q31 to Q45) of Mathematics.
Section – D contains 15 questions (Q46 to Q60) of Mental Ability.
Section – E contains 15 questions (Q61 to Q75) of Biology.
3. Each question carries **+4** marks for correct answer and **–1** mark for wrong answer.
4. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
5. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
6. Write your Name, Father Name, Class, and Date in the space provided at the bottom of this sheet.

NAME: _____

FATHER NAME: _____

CLASS: _____

DATE: _____

**PHYSICS**

1. A sound wave travels from east to west, in which direction do the particles of air move:
(A) East-west
(B) North-south
(C) Up and down
(D) None of these
2. The quantity on which loudness of sound depends is:
(A) Intensity
(B) Distance
(C) Time
(D) Velocity
3. Sound waves in air are:
(A) Longitudinal waves
(B) Radio waves
(C) Transverse waves
(D) Electromagnetic waves
4. The sound propagates in a gaseous medium by:
(A) Transverse waves
(B) Longitudinal waves
(C) Both A and B
(D) Neither A nor B
5. Which of the following is the action-at-distance force ?
(A) muscular force
(B) frictional force
(C) magnetic force
(D) mechanical force
6. Earth always pulls everything towards it due to
(A) muscular force
(B) mechanical force
(C) gravitational force
(D) electrostatic force
7. The force responsible for the wearing out of the car tyres is –
(A) Frictional force
(B) Gravitational force
(C) Magnetic force
(D) Muscular force
8. The SI unit of pressure is
(A) atmosphere
(B) pascal
(C) cm of mercury
(D) mm of mercury
9. At high altitudes the air pressure is than at sea level
(A) less
(B) more
(C) same
(D) can't say
10. The instrument used to measure the pressure is
(A) Hydrometer
(B) Manometer
(C) Galvanometer
(D) Anemometer
11. At sea level, atmospheric pressure is about
(A) 10^3 Pa
(B) 10^4 Pa
(C) 10^5 Pa
(D) none of these
12. The use of lubricants makes the surface
(A) smooth
(B) rough
(C) very rough
(D) no effect

Space for rough work



13. Which of the statement is correct about rolling and sliding friction ?
(A) Rolling friction is greater than sliding friction
(B) Rolling friction is lesser than sliding friction
(C) Rolling and sliding frictions acting on a body are equal
(D) None of these
14. Lubrication of moving surfaces
(A) removes friction
(B) reduces friction
(C) increases friction
(D) has no effect on friction
15. Which of the following is the least ?
(A) static friction
(B) sliding friction
(C) rolling friction
(D) limiting friction
19. The process of obtaining wool is :
(A) shearing, sorting, scouring and dyeing
(B) shearing, scouring, sorting and dyeing
(C) scouring, sorting, shearing and dyeing
(D) sorting, scouring, shearing and dyeing
20. Which of the following is used in automobile battery casings?
(A) HDPE
(B) PP
(C) PVC
(D) Polystyrene
21. This is known as artificial silk :
(A) nylon
(B) polythene
(C) rayon
(D) plastic

CHEMISTRY

16. Wool is obtained from ____ of sheep
(A) Skin
(B) Toes
(C) Fleece
(D) All of the above
17. The process of taking out threads from the cocoon is known as :
(A) rearing
(B) sorting
(C) scouring
(D) reeling
18. Which of the following is made from coconut fibres?
(A) Sweaters
(B) Shoes
(C) Mattresses
(D) Sarees
22. I am the source of synthetic polymers. I am a mixture of a number of carbon compounds which can be separated by fractional distillation. I am
(A) Petrol
(B) Diesel
(C) Petroleum
(D) Both (A) and (C)
23. Gold is used in-
(A) Thermometers
(B) Fuel
(C) Jewellery
(D) Machinery.

Space for rough work



24. Which metal is found in liquid state at room temperature?

- (A) Fe
- (B) Zn
- (C) Hg
- (D) Al

25. Which material show shiny appearance?

- (A) Coal
- (B) Sulphur
- (C) Aluminium
- (D) Carbon

26. The metals that produce ringing sounds, are said to be-

- (A) malleable
- (B) sonorous
- (C) Lustrous
- (D) hard

27. The solution of ash of magnesium ribbon is-

- (A) Acidic
- (B) Basic
- (C) Neutral
- (D) All of these

28. What is the product when sulphur reacts with oxygen?

- (A) Sulphuric acid
- (B) Sulphur trioxide
- (C) Sulphurous acid
- (D) Sulphur dioxide

29. When sulphur dioxide is dissolve in water then-

- (A) Sulphur is formed
- (B) Sulphur trioxide is formed
- (C) Sulphuric acid is formed
- (D) Sulphurous acid is formed

30. What is the chemical formula of sulphurous acid-

- (A) H_2SO_4
- (B) SO_2
- (C) SO_3
- (D) H_2SO_3

MATHEMATICS

31. Every integer is a number.

- (A) whole
- (B) natural
- (C) rational
- (D) positive

32. Sum of two rational number is

- (A) rational
- (B) irrational
- (C) natural number
- (D) integer

33. Evaluate $(105)^2 - (104)^2$

- (A) 200
- (B) 209
- (C) 210
- (D) 211

34. Find the smallest number by which 252 must be multiplied to get a perfect square. Also find the square root of the perfect square obtained

- (A) 7, 42
- (B) 42, 7
- (C) 7, 15
- (D) 15, 7

Space for rough work



35. A general arranges his soldiers in rows to form a perfect square. He finds that in doing so, 60 soldiers are left out; of the total numbers of soldiers be 8160, find the numbers of soldiers in each row.
(A) 70
(B) 80
(C) 90
(D) 100
36. What is least number of which 13720 must be divided so that the quotient is a perfect cube?
(A) 5
(B) 25
(C) 7
(D) 2
37. Find the smallest number by which 1323 must be multiplied so that the product is a perfect cube.
(A) 6
(B) 7
(C) 8
(D) 9
38. Evaluate $\sqrt[3]{1000} + \sqrt[3]{0.008} - \sqrt[3]{0.125}$
(A) 9.7
(B) 1
(C) 2
(D) 2.5
39. Solve the equation:
$$\frac{5x}{3} - \frac{(x-1)}{4} = \frac{(x-3)}{5}$$

(A) 17
(B) $-\frac{13}{14}$
- (C) $-\frac{51}{73}$
(D) 6
40. Solve the equation : $\frac{0.5z+4}{1.2z+6} = \frac{5}{3}$
(A) $z = -4$
(B) $z = 4$
(C) $z = 5$
(D) $z = -6$
41. The length of a rectangle is 16 cm and each of its diagonal measures 20 cm. The breadth is:
(A) 9 cm
(B) 10 cm
(C) 12 cm
(D) 14 cm
42. The length and breadth of a rectangle are in the ratio 4:3. If the diagonal measures 25 cm then the perimeter of the rectangles is
(A) 56 cm
(B) 60 cm
(C) 70 cm
(D) 80 cm
43. Which of the following is not a polynomial?
(A) $\frac{6}{5}x^4 + \frac{3}{2}x^3 + 5x^2 + x + 1$
(B) $5x^4 + 3x^3 + \frac{2}{x^2} + x - 2$
(C) $\sqrt{3}x^3 + x + \sqrt{5}$
(D) 1

Space for rough work



44. If a linear polynomial is multiplied with cubic polynomial, then the obtained polynomial is a
(A) Linear polynomial
(B) Quadratic polynomial
(C) Cubic polynomial
(D) Biquadratic polynomial
45. Solve the equation:
 $\frac{x}{2} + \frac{x}{3} + \frac{x}{4} = 13$
(A) 7
(B) 12
(C) 9
(D) 11
48. Arun said, "this girl is the wife of the grandson of my mother." Who is Arun to the girl?
(A) Father
(B) Grandfather.
(C) Husband
(D) Father-in-law
49. Pointing to a man Asha said, "His brother's father is the only son of my grand father". How Asha is related to the man.
(A) Mother
(B) Aunt
(C) Sister
(D) Daughter

Mental Ability

46. I went 15 m to the North, then turned West and covered 10 m, then turned South, and covered, 5 m then turned East and covered 10 m. In which direction am I now from my house?
(A) North
(B) South
(C) East
(D) West
47. Shyam went 70 metre in the East before turning to his right. He went 10 metre before turning to his right again and went 10 metre from this point. From here he went 90 metre to the North. How far was he from the starting point?
(A) 80 metre
(B) 100 metre
(C) 140 metre
(D) 260 metre
50. Find the day of the week on 26 January, 1950
(A) Tuesday
(B) Friday
(C) Wednesday
(D) Thursday
51. If on 14th day after 5th March be Wednesday, what day of the week will fall on 10th Dec. of the same year?
(A) Friday
(B) Wednesday
(C) Thursday
(D) Tuesday

Directions : (52 to 53) A, B, C and D are to be seated in a row. But C and D cannot be together. Also B cannot be at the third place.

52. Which of the following must be false?
(A) A is at the first place
(B) A is at the second place
(C) A is at third place
(D) A is at the fourth place

Space for rough work



53. If A is not at the third place, then C has which of the following option?
(A) The first place only
(B) The third place only
(C) The first or third place only
(D) Any of the places
54. 2, 3, 5, 7, ?
(A) 9
(B) 10
(C) 11
(D) 14
55. 210, 120, ?, 24, 6, 0
(A) 64
(B) 48
(C) 35
(D) 60
56. Find the missing term in the given figure
- | | | |
|----|----|----|
| 17 | 11 | 19 |
| 12 | 13 | 16 |
| 25 | 4 | ? |
- (A) 36
(B) 9
(C) 25
(D) 64
57. Find the missing term in the given figure
- $\begin{array}{c} 12 \quad 18 \quad 30 \\ \diagdown \quad | \quad \diagup \\ 6 \end{array}$ $\begin{array}{c} 16 \quad 32 \quad 40 \\ \diagdown \quad | \quad \diagup \\ 8 \end{array}$ $\begin{array}{c} 36 \quad 18 \quad 27 \\ \diagdown \quad | \quad \diagup \\ ? \end{array}$
- (A) 18
(B) 12
(C) 9
(D) 6
58. X, U, S, P, N, K, I, ?
(A) J
- (B) K
(C) M
(D) F
59. X, A, D, G, J, ?
(A) N
(B) O
(C) M
(D) P
60. If 'P' means '+', 'R' means 'x', 'S' means '-', 'T' means '÷' then what is the value of
 $5 R 9 P 7 S 9 T 3 P 6 = ?$
(A) 54
(B) 128
(C) 59
(D) 55

BIOLOGY

61. The process of separating grains from the chaff is known as -
(A) Threshing
(B) Winnowing
(C) Harvesting
(D) Weeding
62. Which one of the following is a weed ?
(A) Wheat
(B) Chenopodium
(C) Maize
(D) Rice
63. Rahat and Dhekli are the -
(A) Names of two persons
(B) Names of two villages
(C) Traditional methods of irrigation
(D) None of these
64. Transfer of seedlings from nursery to the main field is -
(A) Transplantation
(B) Sowing
(C) Weeding
(D) None

Space for rough work



65. Small pox is caused by
(A) Virus
(B) Bacteria
(C) Housefly
(D) Mosquito
66. The smallest organisms which cause disease among plants are -
(A) Viruses
(B) fungi
(C) Bacteria
(D) Mycoplasma
67. Which of the following disease is caused by a fungus -
(A) Small pox
(B) Tuberculosis
(C) Cancer
(D) Aspergillosis
68. *Amoeba, Euglena, Girardia* all are examples of -
(A) Protozoa
(B) Viruses
(C) Algae
(D) Fungi
69. The Red Data Book gives an account of -
(A) Endangered plants
(B) Extinct animals
(C) Endangered plants and animals
(D) None
70. All the plants found in a particular area are termed as -
(A) Flora
(B) Fauna
(C) Trees
(D) Garden
71. Dechigam sanctuary is located in
(A) W. B.
(B) M.P.
(C) J. & K.
(D) Rajasthan
72. According to IUCN red list. What is the status of red panda (*Ailurus fulgens*)
(A) Extinct species
(B) Vulnerable species
(C) Endangered species
(D) Critically endangered species
73. Striking difference between a plant cell and an animal cell is due to the presence of -
(A) Centrosome
(B) Plasma membrane
(C) Cell wall
(D) Chloroplast
74. All are membrane bounded cell organelles except -
(A) Mitochondria
(B) Spherosomes
(C) Ribosomes
(D) Lysosomes
75. Organisms lacking a nucleus and membrane-bound organelles are called:
(A) Diploid
(B) Haploid
(C) Prokaryotes
(D) Eukaryotes

Space for rough work