

Name .....

Batch..... Roll No. ....

Date :18-08-2024

**FOUNDATION**  
**SCREENING MOCK TEST SERIES**

FN24<sub>d</sub>/TP/PCBM

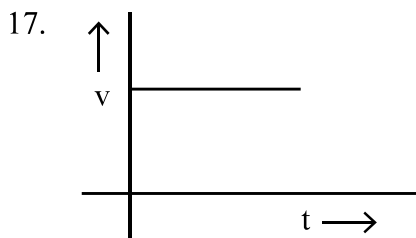
**PHYSICS + CHEMISTRY + BIOLOGY + MATHEMATICS**

Class X (IX Studying)

**PHYSICS**

1. Focal length of a plane mirror is  
A) At infinity                      B) Zero                      C) Negative                      D) None of these
2. The optical phenomenon twinkling of stars, is due to  
A) Atmospheric reflection                      B) Total reflection  
C) Atmospheric refraction                      D) Total refraction
3. A concave mirror gives real, inverted and same size image if the object is placed  
A) At F                      B) At infinity                      C) At C                      D) Beyond C
4. Which of the following is true for the third law of motion?  
A) Action-Reaction pair always acts on the same body  
B) They act on different bodies in opposite directions  
C) Action-Reaction pairs have the same magnitude and directions  
D) Act on either body at normal to each other
5. Which of the following is true about force?  
A) Force is invisible                      B) Force can move a body  
C) It can deform a body                      D) All of the above
6. Rocket works on the principle of conservation of  
A) Mass                      B) Energy                      C) Momentum                      D) Velocity
7. Which of the following is the SI unit of force?  
A)  $\text{kgm/s}^2$                       B)  $\text{kgm/s}$                       C)  $\text{Newton/m}$                       D)  $\text{Newton}$
8. The path length travelled by a body in a given time interval is known as \_\_\_\_\_  
A) Distance                      B) Velocity                      C) Acceleration                      D) Moment

9. Velocity is defined as \_\_\_\_\_ per time
- A) Distance                      B) Displacement                      C) Power                      D) Acceleration
10. The physical quantity that has both magnitude and direction is known as
- A) Vectors                      B) Scalars                      C) Both A & B                      D) Neither A nor B
11. Name the scientist who first used a glass prism to obtain the spectrum of sun light?
- A) C.V Raman                      B) Lord Reyleigh                      C) Issac Newton                      D) S.Chandrashekar
12. A smooth shining surface, which rebounds the light back in the same or in different direction, is called
- A) A mirror                      B) A lens                      C) Reflection of light                      D) Point of incidence
13. In case of reflection of light, the angle of incidence (i) and the angle of reflection (r) are related as
- A)  $i = r$                       B)  $i < r$                       C)  $i > r$                       D) No definite relation
14. If light falls perpendicularly on a plane mirror, what will be the angle in which it will be reflected?
- A)  $45^\circ$                       B)  $90^\circ$                       C)  $180^\circ$                       D)  $360^\circ$
15. In our eye \_\_\_\_\_ cells can sense colour
- A) Red                      B) Cone                      C) Both rod and cone                      D) Neither rod nor cone
16. What does the slope of the velocity-time graph give?
- A) Speed                      B) Velocity                      C) Acceleration                      D) Displacement



From the given v-t graph it can be inferred that the object is

- A) In uniform motion                      B) At rest
- C) In non-uniform motion                      D) Moving with uniform acceleration



CHEMISTRY

26. If the boiling point of components have very small differences, \_\_\_\_\_ can be used to separate them
- A) Separating funnel  
B) Centrifugation  
C) Fractional distillation  
D) Chromatography
27. Chromatography was first employed for separating \_\_\_\_\_ substances
- A) Denser  
B) Coloured  
C) Lighter  
D) All of these
28. Identify pure substance
- A) Salt solution  
B) Air  
C) Carbon dioxide  
D) Soil
29. State a separation technique that could be used to separate camphor and common salt from a mixture.
- A) Filtration  
B) Crystallisation  
C) Evaporation  
D) Sublimation
30. Who discovered elements like Selenium, Thorium, Cerium and Silicon?
- A) Sir Humphry Davy  
B) Henry Cavendish  
C) Berzelius  
D) John Dalton
31. \_\_\_\_\_ is the smallest particle which shows all the characteristic properties of an element
- A) Atom  
B) Molecule  
C) Compound  
D) Mixture
32. How many atoms are present in one molecule of  $\text{H}_2\text{SO}_4$ ?
- A) 6  
B) 7  
C) 1  
D) 2
33. Which one of the following is a petrochemical?
- A) Ammonia  
B) Coke  
C) Acetone  
D) Paraffin wax
34. Conversion of dead vegetation into coal is called
- A) Carbonisation  
B) Distillation  
C) Coal gas  
D) Natural gas

35. Least polluting fuel form vehicles is
- A) Coke                      B) Kerosene                      C) Diesel                      D) CNG
36. In India, vast reserves of natural gas are found in
- A) Tripura                      B) Rajasthan                      C) Maharashtra                      D) All of these
37. A balanced chemical equation is in accordance with
- A) Avagadro's law                      B) Law of constant proportion
- C) Law of conservation of mass                      D) Law of definite proportion
38. Two elements X and Y combine in gaseous state to form XY in the ratio 1 : 35.5 by mass. The mass of Y that will be required to react with 2g of X is
- A) 7.1 g                      B) 3.55 g                      C) 46 g                      D) 71 g
39. Which of the following is not correct postulates of Dalton's atomic theory?
- A) All matter is made up of tiny particles called atom
- B) Atoms of the different elements have same masses and same chemical properties
- C) Atoms of the given element are identical in mass
- D) Atoms combine in the ratio of small whole numbers to form compounds
40. Which of the following is a chemical reaction that produces heat when a substance reacts with oxygen?
- A) Oxidation                      B) Combustion                      C) Reduction                      D) Hydrolysis
41. Ignition temperature is the \_\_\_\_\_ temperature which the substance catches fire
- A) Lowest                      B) Highest                      C) Maximum                      D) Room
42. Which of the following is not an inflammable substance?
- A) Alcohol                      B) Wood                      C) Ethanol                      D) LPG
43. Which of the following describes a type of combustion in which a substance suddenly bursts into flame without any apparent cause?
- A) Rapid                      B) Explosion                      C) Spontaneous                      D) None of the above





60. Which of the following crops are also known as winter crops?
- A) Rabi crops            B) Zaid crops            C) Kharif crops            D) All of the above
61. Mushroom belongs to
- A) Algae            B) Virus            C) Fungi            D) None of these
62. Rhizobium bacteria
- A) Help in digestion            B) Help in nitrogen fixation
- C) Cause diseases            D) All of the above
63. Microorganisms are
- A) Unicellular            B) Multicellular            C) Both            D) None of these
64. Which of the following are examples of autotrophic organisms?
- A) Fungi and virus            B) Virus and bacteria
- C) Green plants and some bacteria            D) None of the above
65. Which of the following are filtration units of kidneys?
- A) Ureter            B) Nephrons            C) Neurons            D) Urethra
66. During respiration in humans, gaseous exchange takes place in
- A) Alveoli of lungs            B) Throat and larynx            C) Alveoli and throat            D) None of the above
67. Which of the following plant tissue is used to transport minerals and water from the roots to the leaf?
- A) Phloem            B) Parenchyma            C) Xylem            D) Collenchyma
68. What are the primary nutrients that provide quick usable energy to body?
- A) Carbohydrates            B) Proteins            C) Lipids            D) Nucleic acid
69. Which group of enzymes breaks up starches and carbohydrates?
- A) Proteases            B) Lipases            C) Amylases            D) All of these



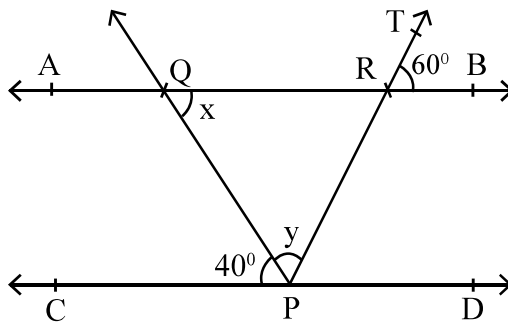
70. Pancreas produces digestive enzymes and releases them into
- A) Colon                      B) Gall bladder                      C) Liver                      D) Duodenum
71. What is the structural and functional unit of life?
- A) Cell                      B) Organism                      C) Tissue                      D) Organ
72. Which scientist proposed the cell theory?
- A) Matthias Schleiden and Theodor Schwann    B) Robert Hooke
- C) Louis Pasteur                      D) Anton Van Leeuwenhoek
73. Which types of cells lack a well-defined nucleus?
- A) Prokaryotic cells    B) Eukaryotic cells    C) Plant cells                      D) Animal cells
74. Which of the following is not a type of animal tissue?
- A) Epithelial tissue    B) Nervous tissue                      C) Muscular tissue                      D) Vascular tissue
75. The tissue responsible for transmitting electrical impulses in human body is :
- A) Epithelial tissue    B) Nervous tissue                      C) Muscular tissue                      D) Connective tissue

### MATHEMATICS

76. Which of the following is a rational number that lies between  $\frac{3}{5}$  and  $\frac{8}{3}$  ?
- A) 2.234567891011.....                      B) 2.7878787878.....
- C) 3.22222.....                      D) 2.543543543.....
77. Which of the following is a linear expression in one variable?
- A)  $7x + y = 2$                       B)  $5 + 2x = 8$                       C)  $y^2 + x$                       D)  $35x + 7$
78. Solve  $79x - 35 = 19 - 5x$
- A)  $x = \frac{14}{9}$                       B)  $x = \frac{9}{14}$                       C)  $x = \frac{9}{16}$                       D)  $x = \frac{16}{9}$

79. A number whose decimal expansion is terminating or non-terminating recurring is called a/an
- A) Irrational number    B) Whole number    C) Rational number    D) Integer
80. What is the equation that represents the statement “three less than four times a number is equal to seven”?
- A)  $4x - 3 = 7$                       B)  $4x + 3 = 7$                       C)  $4x - 3 = -7$                       D)  $4x + 3 = -7$
81. What is the value of  $\sqrt{196}$  ?
- A) 11                                      B) 21                                      C) 16                                      D) None of these
82. Which of the following is an irrational number?
- A) 2.35853585.....                      B) 4.3
- C) 2.791093458784.....                      D)  $\sqrt{16}$
83. The decimal expansion of an irrational number will be :
- A) Terminating                                      B) Non-terminating recurring
- C) Non-terminating non-recurring                      D) None of these
84. Solve and find the value of x :
- $$\frac{x-5}{2} = 5 - 7x$$
- A)  $x = -1$                                       B)  $x = 1$                                       C)  $x = 5$                                       D) None of these
85. Which of the following is a perfect cube?
- A) 243                                      C) 2744                                      C) 9                                      D) None of these
86. The number 108 is not a perfect cube. By which smallest natural number should 108 be multiplied so that the product is a perfect cube
- A) 3                                      B) 5                                      C) 2                                      D) None of these
87. The value of  $\frac{1}{2^{-2}}$  is
- A) 4                                      B) 8                                      C) -4                                      D) None of these

88. Find  $m$  so that  $(-2)^{m+2} \times (-2)^2 = -32$
- A)  $m = 2$                       B)  $m = -2$                       C)  $m = 1$                       D) None of these
89. Find the value of  $(2^0 + 3^{-2}) \times 9$
- A) 10                      B) 20                      C) -10                      D) None of these
90.  $2 \times 10^{-4} =$
- A) 0.00002                      B) -0.00002                      C) 0.0002                      D) None of these
91.  $305000 =$
- A)  $3.05 \times 10^4$                       B)  $3.05 \times 10^5$                       C)  $3.05 \times 10^{-5}$                       D) None of these
92. One of the following numbers is a perfect square. Looking at their units digit, identify which of the following is a perfect square :
- A) 1032773                      B) 256036                      C) 248687                      D) 348228
93. In the given figure, if  $AB \parallel CD$ ,  $\angle QPC = 40^\circ$  and  $\angle BRT = 60^\circ$  then find  $x$  and  $y$



- A)  $x = 40^\circ, y = 60^\circ$                       B)  $x = 40^\circ, y = 80^\circ$                       C)  $x = 60^\circ, y = 80^\circ$                       D) None of these
94. Which of the following statements is/are true :
- i) Angles opposite to equal sides of an isosceles triangle are unequal
- ii) The sides opposite to equal angles of a triangle are equal
- iii) In an isosceles triangle, two angles are always equal
- A) i and ii are true                      B) ii and iii are true                      C) All are true                      D) None is true

95. Sum of the three angles of a triangle is always :
- A)  $360^{\circ}$                       B)  $90^{\circ}$                       C)  $120^{\circ}$                       D)  $180^{\circ}$
96. The degree of the following polynomial is :
- $$5 - y^3 - 2y^4 + 4y^5 + 7y^{10}$$
- A) 5                      B) 4                      C) 3                      D) None of these
97. The degree of a non-zero constant polynomial is :
- A) Zero                      B) One                      C) Two                      D) Cannot be determined
98. Which of the following is/are polynomials :
- i)  $x^2 + 2\sqrt{x} + 7$                       ii)  $x^3 + 2x + 1$                       iii)  $x^{-2} + 7$                       iv)  $x^2$
- v)  $y^3 - 9$                       vi)  $3t^2 + 1$
- A) Only ii, iv and v are polynomials
- B) Only ii, v and vi are polynomials
- C) Only ii, iv, v and vi are polynomials
- D) None of these
99. Which of the following is a linear polynomial :
- A)  $x^3 - x + 1$                       B)  $x + 7$                       C)  $x^2 - 3x$                       D)  $X^2$
100. The value of the polynomial  $7x - 3x^2 + 2$  at  $x = -2$  is
- A) 24                      B) -20                      C) -24                      D) None of these

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# FOUNDATION SCREENING MOCK TEST SERIES

FN24<sub>d</sub>/TP/PCBM

P + C + B + M - KEY

Class X (IX Studying)

## PHYSICS

1. A
2. C
3. C
4. B
5. D
6. C
7. D
8. A
9. B
10. A
11. C
12. A
13. A
14. C
15. B
16. C
17. A
18. B
19. B
20. D
21. C
22. B
23. A
24. A
25. A

## CHEMISTRY

26. C
27. B
28. C
29. D
30. C
31. A
32. B
33. D
34. A
35. D
36. D
37. C
38. D
39. B
40. B
41. A
42. B
43. C
44. D
45. C
46. A
47. D
48. C
49. B
50. A

## BIOLOGY

51. B
52. A
53. C
54. D
55. C
56. A
57. C
58. D
59. A
60. A
61. C
62. B
63. B
64. C
65. B
66. A
67. C
68. A
69. C
70. D
71. A
72. A
73. A
74. D
75. B

## MATHEMATICS

76. D
77. D
78. B
79. C
80. A
81. D
82. C
83. C
84. A
85. B
86. C
87. A
88. C
89. A
90. C
91. B
92. B
93. B
94. B
95. D
96. D
97. A
98. C
99. B
100. C