

NEW STANDARD ACADEMY

Marks: 40

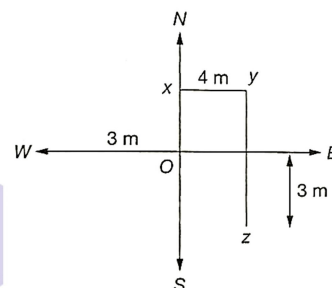
Date : 20-04-2026

CLASS : 9TH

Time: 2 hours

PHYSICS

- In case of a moving body:
 - displacement = distance
 - displacement is \geq distance
 - displacement is \leq distance
 - displacement is always less than the distance
- The average speed of a moving object is equal to the magnitude of its average velocity when it travels
 - in a straight line in the same direction
 - in a zigzag path
 - on a semicircular path
 - back and forth along the same path
- A person travels along a straight road for the first half-time with a velocity v_1 and the second half-time with a velocity v_2 . The mean velocity is given by
 - $(v_1 + v_2) / 2$
 - $v_1 v_2 / 2$
 - $v_1 v_2 / (v_1 + v_2)$
 - $2v_1 v_2 / (v_1 + v_2)$
- When a particle moves with uniform velocity
 - The particle must be at rest.
 - The particle moves along a curved path.
 - The particle moves along a circle.
 - The particle moves along a straight line.
- When a body moves along a semicircle, the total angle subtended by it at the centre of the circle is:
 - $\pi / 2$
 - 2π
 - π
 - None of these
- The state of motion is described by the
 - Position of rest
 - Position of motion
 - Both by the state of rest and motion
 - None of these.
- The given Figure shows the path OXYZ followed by a man, who starts from O. The displacement of the man is



- 6 m
 - 4 m
 - 5 m
 - 3 m
- Which of the following is a vector quantity?
 - Distance
 - Speed
 - Displacement
 - Time
 - A student walks 4 m east and then 3 m west. The displacement is:
 - 7 m
 - 1 m
 - 3 m
 - 4 m
 - The SI unit of speed is:
 - m/s
 - km/h
 - m
 - m/s^2

CHEMISTRY

- The SI unit of temperature is
 - $^{\circ}C$
 - $^{\circ}F$
 - K
 - All of these
- The boiling point of alcohol is $78^{\circ}C$. What will be the temperature in Kelvin scale?
 - 373 K
 - 351 K
 - 375 K
 - 78 K
- The boiling point of water in Kelvin scale is
 - 573 K
 - 273 K
 - 373 K
 - 100 K
- A change of state directly from solid to gas without changing into liquid state is called
 - Sublimation
 - Gasification
 - Solidification
 - Crystallization
- Convert 300 K temperature to the Celsius scale.
 - $300^{\circ}C$
 - $100^{\circ}C$
 - $27^{\circ}C$
 - $30^{\circ}C$
- Which of the following is rigid?

- (a) Solids (b) Liquids
(c) Gases (d) Both (b) and (c)
17. The quantity of matter present in an object is called its
(a) Weight (b) Volume
(c) Mass (d) Density
18. Which of the following is not an example of matter?
(a) Air (b) Feeling of cold
(c) Dust (d) All of these
19. Which is not correct for gases?
(a) Gases have definite mass
(b) Gases have definite shape
(c) Gases have definite volume
(d) Both (b) and (c)
20. In liquids, there is _____ and _____ between particles than in solids.
(a) Strong force of attraction, more spacing
(b) Weaker force of attraction, less spacing
(c) Weaker force of attraction, more spacing
(d) Strong force of attraction, less spacing

BIOLOGY

21. Which of the following scientists first proposed the cell theory?
(a) Robert Hooke and Robert Brown
(b) Schleiden and Schwann
(c) Purkinje and Virchow
(d) Leeuwenhoek and Hooke
22. Protoplasm is defined as:
(a) Cytoplasm only
(b) Nucleoplasm only
(c) Cytoplasm + Nucleus
(d) Cell wall + Cell membrane
23. The plasma membrane is primarily composed of:
(a) Proteins and Carbohydrates
(b) Lipids and Proteins
(c) Cellulose and Lipids
(d) Chitin and Proteins
24. If a cell is placed in a hypertonic solution, what will happen to it?
(a) It will swell
(b) It will stay the same size
(c) It will shrink
(d) It will burst
25. Shrinkage of the living cell content away from the cell wall when placed in a concentrated (hypertonic) solution is known as:
(a) Diffusion (b) Osmosis
(c) Plasmolysis (d) Hemolysis

26. The cell membrane is found in:
(a) Animal cells only
(b) Plant cells only
(c) Both animal and plant cells
(d) Bacterial cells only
27. Osmosis is the net movement of water molecules through a selectively permeable membrane from an area of:
(a) Higher solute concentration to lower solute concentration.
(b) Lower water potential to higher water potential.
(c) Higher water concentration to lower water concentration.
(d) Lower concentration of water to higher concentration of water.
28. The process by which amoeba acquires its food is:
(a) Pinocytosis (b) Endocytosis
(c) Exocytosis (d) Diffusion
29. _____ coined the term "cell."
(a) Gorbachev (b) Himmler
(c) Robert Hooke
(d) Antonie van Leeuwenhoek
30. Which structure is present in plant cells but strictly absent in animal cells?
(a) Mitochondria (b) Cell Wall
(c) Ribosomes (d) Cytoplasm

MATH'S

31. Which one of the following is a polynomial?
(a) $\frac{x^2}{2} - \frac{2}{x^2}$ (b) $\sqrt{2x}-1$
(c) $x^2 + \frac{3x^{\frac{3}{2}}}{\sqrt{x}}$ (d) $\frac{x-1}{x+1}$
32. Which of the following algebraic expression is a cubic polynomial in one variable
(a) $2x - 5x^2$ (b) $2x^2y - 3xy + 5$
(c) $2 + 7y - 3y^2 + \sqrt{3}y^3$ (d) $3x^4 + 7x^2 - 5$
33. If $p(x) = 7x^3(x^2 - 5)$ then the degree of the polynomial $p(x)$ is
(a) 3 (b) 2
(c) 5 (d) 7
34. If $p(x) = (3x^2 - 1)(2x^3 + 1)$ then the leading coefficient of the polynomial $p(x)$ is
(a) 3 (b) 2
(c) 5 (d) 6
35. If $p(x) = x^2 - 2\sqrt{2}x + 1$ then $p(2\sqrt{2})$ is equal to
(a) 0 (b) 1

- (c) $4\sqrt{2}$ (d) $8\sqrt{2} + 1$
36. $x = 5, y = 2$ is a solution of the linear equation
- (a) $x + 2y = 7$ (b) $5x + 2y = 7$
(c) $x + y = 7$ (d) $5x + y = 7$
37. The graph of the linear equation $y = 3x$ passes through the point
- (a) (3,1) (b) (0,3)
(c) (1,3) (d) (3,0)
38. In the linear equation $y = mx + c$ if $m < 0$ the line represents
- (a) Linear growth (b) Linear decay
(c) Constant value (d) Vertical line
39. Check which of the following are solutions of the equation $x - 2y = 4$ and which are not:
- (a) (0, 2) (b) (2,0)
(c) (4,0) (d) $\sqrt{2}, 4\sqrt{2}$
40. Find the value of k , if $x = 2, y = 1$ is a solution of the equation $2x + 3y = k$.
- (a) 3 (b) 2
(c) 5 (d) 7

