NEW STANDARD ACADEMY

Marks: 120

Date : 26-05-25 **CLASS : 9TH** **Time: $2\frac{1}{2}$ hours**

PHYSICS

1. A bullet penetrates a wall with 20m/s .If it moves 100 m before stopping .find retardation produced.
   (a) -2.5 m/s^2 (b) +2.5m/s^2
   (c) -2m/s^2 (d) +4m/s^2
2. A ball is dropped from certain height h. find the velocity while touching the ground (h = 400m) (g=10m/s^2).
   (a) $\sqrt{8000}$ m/s^2 (d) $40\sqrt{5}$m
   (c) $40\sqrt{5}$ m/s (d) $5\sqrt{40}$ m/s
3. How much time time will a truck needs to attain 48m/s of velocity at 2m/s^2 acceleration starting from rest.
   (a) 22.5hr (b) 22.5minute
   (c) 22.5 s (d) 45 hr
4. If person moves at the rate of 5m/s^2 for 10 second starting from rest find the distance travelled in last second
   (a) 95/2 m (b) 95/2 m/s
   (c) 95m (d) 47.5 m/s^2
5. A person starts swimming from rest and swims for 25 second . If he attains velocity of 35m/s. find his acceleration (neglect water resistance)
   (a) 5/7 m/s^2 (b) 5/7 m/s
   (c) 7/5m/s^2 (d) 7/5 m/s
6. A man walks with speed 12 m/s find his speed after 5 minutes if he moves at the rate of 1 m/s^2
   (a) 3.12 m/s (b) 312 m/s
   (c) 31.2 m/s (d) 17 m/s
7. Arpita starts her journey to school from rest and attains a speed of 8m/s in 10 second. Find the distance of her school from home
   (a) 400 m (b) 40m
   (c) 4km 4 m
8. A body is moving with initial velocity 4m/s and acceleration with 2m/s^2. Its displacement after 2 s is
   (a) 8m (b) 20m
   (c) 123m (d) 10m
9. A bullet penetrates wall with velocity 20m/s .If it stops after travelling 40m The retardation is
   (a) 0.5m/s^2 (b) 5 m/s^2
   (c) 2 m/s^2 (d) 4 m/s^2
10. Vanshika start her journey from rest and travel 600 m at the rate of 3 m/s^2.The time taken by her is
    (a) 20 minute (b) 20 second
    (c) 40 second (d) $\sqrt{200}$ second
11. While riding a bike Abhi applies break at velocity 144 km/h to stop it. Find the retardation if time taken to stop is 10 s.
    (a) 40 m/s^2 (b)4 m/s
    (c) 4 m/s^2 (d) 14.4 m/s^2
12. A moving body is covering the distance directly proportional to the square of the time. The acceleration of the body is:
    (a) increasing (b) decreasing
    (c) zero (d) constant
13. Distance travelled by a particle in a given interval of time is always
    (a) zero (b) positive
    (c) negative (d) -ve and +ve
14. Displacement is a
    (a) vector quantity (b) scalar quantity
    (c) both of them (d) none of these
15. Choose the correct option from the table-

(i) Third equation of motion	P→ s =ut+$\frac{1}{2}$at^2
(ii) Ball dropped from height h	Q→ h =gt+$\frac{1}{2}$at^2
(iii) Second equation of motion	R→ v^2 = u^2+as
(iv) Average speed	$S \rightarrow V_{av} = \frac{d_1+d_2+\cdots d_n}{t_1+t_2+\cdots t_n}$

    (a) (i) –R ,(ii)-P , (iii) – Q, (iv)-S
    (b) (i) –R ,(ii)-P , (iii) –S, (iv)-Q
    (c) (i) –R ,(ii)-Q , (iii) – P, (iv)-S
    (d) (i) –P ,(ii)-Q , (iii) – R, (iv)-S

CHEMISTRY

16. Which of the following is not a compound?
    (a) Sodium chloride (b) Water
    (c) Iron filing (d) Copper sulphate
17. The concentration of solution in terms of mass percentage is the mass of the solute in grams which is present in
    (a) 10 g of solvent (b) 10 g of solution
    (c) 100 g of solvent (d) 100 g of solution
18. Which of the following are homogeneous in nature?
    (a) Ice and soil (b) Wood and soil
    (c) Water and air (d) Soil and air
19. Which of the following is not a mixture?
    (a) Sand in water (b) Sugar solution
    (c) CuSO4.5H$_2$O (d) Milk

20. Which of the following is a liquid metal?
(a) Copper (b) Mercury
(c) Bromine (d) Silver

21. Which of the following is a physical change?
(a) Evaporation of alcohol
(b) Melting of ice (c) Rusting of iron
(d) Both (1) and (2)

22. Paint is
(a) a sol (b) a pure compound
(c) an emulsion (d) a gel

23. The particle size of a substance 'P' present in water is 200 nm. What will be the nature of the solution expected?
(a) True solution (b) Colloidal solution
(c) Emulsion (d) Suspension

24. Homogeneous mixture among the following is
(a) milk (b) cloud
(c) smoke (d) air

25. Milk is the example of which of the following type of colloid?
(a) Sol (b) Emulsion
(c) Aerosol (d) Foam

26. Which of the following is an example of oil-in-water type emulsion?
(a) Milk (b) Butter
(c) Cream (d) Both (1) and (3)

27. A little soil was stirred into water taken in a beaker. The beaker was allowed to stand. The mud was found to settle down. The contents were filtered.
The filtrate will be
(a) a true solution (b) colloidal solution
(c) can be a true solution or a colloidal Solution
(4) a suspension.

28. In a solid-liquid mixture, the heavier solid settles down at the bottom.
What is the process known as?
(a) Filtration (b) Sedimentation
(c) Decantation (d) Stirring

29. Which of the following is true about 'ash' formed by burning of wood?
(a) The properties of ash will be similar to those of wood.
(b) The properties of ash will be similar to those of air.
(c) The properties of ash will be different from those of both wood and air.
(d) The properties of ash will be similar to those of both wood and air.

30. The size of a colloidal particle is
(a) 10^{-1} to 10^{-2} m. (b) 10^{-9} to 10^{-6} m
(c) 10^{-8} to 10^{-5} m (d) 10^{-6} to 10^{-8} m

BIOLOGY

31. The primary function of smooth endoplasmic reticulum in liver cells is
(a) Detoxification (b) Lipid synthesis
(c) Protein synthesis (d) Carbohydrate Synthesis

32. Nucleolus is present in
(a) Eukaryotic cells (b) Prokaryotic cells
(c) Both (1) and (2) (4) None of the above

33. Which of the following is called the brain of the cell?
(a) Nucleus (b) Mitochondria
(c) Ribosomes (d) Plasma membrane

34. Which one is not a part of nucleus?
(a) Chromatin (b) Nucleolus
(c) Centrosome (d) Nucleoplasm

35. Nucleus is separated from surrounding cytoplasm by a nuclear envelope which is
(a) Single and porous (b)Double and porous
(c) Single and non-porous
(d) Double and non-porous

36. The function of the nucleolus in the cell is
(a) Secretion
(b) Synthesis of DNA
(c) Synthesis of RNA and ribosomes
(d) None of the above

37. Centriole is associated with
(a) DNA synthesis (b) Reproduction
(c) Spindle formation (d) Respiration

38. Who discovered nucleolus
(a) Robert Hook (b) Robert brown
(c) Fontana (d) Leeuwn hook

39. Chromatin thread is made up of
(a) Only DNA (b) Only protein
(c) DNA and protein
(d) No DNA and protein

40. During mitosis -
(a) Chromosome number reduce
(b) Chromosome number same
(c) Chromosome number become 1/4
(d) None of the above

41. Meosis take place during
(a) Growth of the organism
(b) Gamete formation
(c) In both
(d) None of the above

42. Nucleus present in
(a) Bacteria
(b) Blue green algae
(c) Amoeba
(d) None of the above

43. Mitosis
(a) Leads to recombinant daughter cells
(b) Is a reductional division
(c) Leads to formation of parental type of daughter cells
(d) Occurs in gametes

44. Nucleus of the cell was discovered by
(a) Robert Hooke (b) Leeuwenhoek

(c) Robert Brown (d) Virchow

45. Chromosomes are made up of
(a) DNA (b) RNA
(c) Protein (d) Both (a) and (c)

MATH

46. In which quadrant does the point (-7, – 9) lie?
(a) Quadrant I (b) Quadrant II
(c) Quadrant III (d) Quadrant IV

47. Coordinates of two points are given by A $\left(\frac{13}{2}, 5\right)$and B $\left(4, -\frac{2}{13}\right)$. The value of (abscissa of A - ordinate of B
(a) $\frac{165}{26}$ (b) $-\frac{165}{26}$
(c) $\frac{173}{26}$ (d) - $\frac{173}{26}$

48. Which of the points P(0, 3), Q(1,0), R(0, -1), S(-5, 0), T(1, 2) do not lie on x-axis?
(a) P and R only (b) Qand S only
(c) P. Rand T (d) Q, Sand T

49. The points O(0.0), A(4,0) and B(0,4)
(a) are collinear
(b) form a scalene triangle
(c) form an equilateral triangle
(d) form an isosceles right utangle

50. If the point P(x, y) lies in the fourth quadrant, then:
(a) x > y (b) x < y
(c) x > -y (d) y > -x

51. The reflection of the point P(-4, 5) in y-axis has the coordinates:
(a) (-4,-5) (b) (4,5)
(c) (4.-5) (d) (5,-4)

52. The point whose ordinate is 4 and which lies on y-axis is
(a) (4,0) (b) (0,4)
(c) (1,4) (d) 4,2)

53. The area of the triangle formed by the points P(0, 1), (0,5) and (3,4) is
(a) 16 sq. units (b) 8 sq. units
(c) 4 sq. units (d) 6 sq. units

54. The distance between the images of points P(-7, 4) and Q(7, 4) in x-axis is:
(a) 7 units (b) 8 units
(c) 11 units (d) 14 units

55. The three vertices of a square ABCD are A(3, 2), B(-2, 2) and D(3, -3). The coordinates of C and the area of square ABCD respectively are:
(a) C(-2,-3), 5 sq. units
(b) C(3,3), 5 sq. units
(c) C(3, 2), 25 sq. units
(d) C(-2,-3), 25 sq. units

56. The perpendicular distance of the point P(4,3) from x-axis is:
(a) 4 (b) 3
(c) 5 (d) none of these

57. The distance of the point P(-6, 8) from the origin is:
(a) 6 units (b) 8 units
(c) 14 units (d) 10 units

58. If (x + 3,5) = (2, 2 - y), then the values of the x and y are:
(a) x = 5, y = 3 (b) x = -1, y = -3
(c) x = 0, y = -3 (d) x = 1.y = 3

59. P is the point (-5, 3) and Q is the point (-5, m). If sum of abscissas and ordinates of both points is equal, then the possible value of m is:
(a)-5 (b)-13
(c) 10 (d) 3

60. Abscissa of all points on the x-axis is:
(a) 0 (b) 1
(c) 2 (d) any real number