

1. When the passenger moving in a bus, the road side trees appear to be moving (a) Back ward (b )Forward
2. In uniform motion the object covers
  - (a) equal distance(b) unequal distance
3. Where objects cover unequal distances in equal interval of time then the motion is called (a) uniform motion (b) non uniform motion
4. An object travels 16m in 4sec and another 16 m in 2 sec. what is the average speed of the object (a) 5.33 ms<sup>-1</sup> (b) 5. 34ms<sup>-1</sup>
5. If we specify, its direction of motion along with its speed, the quantity that specifies with the aspects is called (a) velocity (b) motion
6. The velocity of an object can be (a) non uniform or variable (b) uniform or variable
7. A car accelerate uniformly from 18 km h<sup>-1</sup>to 36 km h<sup>-1</sup>in 5 sec. calculate the acceleration (a) 1ms<sup>-2</sup> (b) 1 ms<sup>-3</sup>
8. A train starting from rest attains a velocity of 72 km h<sup>-1</sup>in 5 minutes. Assuming that the acceleration is uniform. Find the distance traveled by the train for attaining this velocity (a) 2km (b) 5km
9. A car goes from a town A to another town B with a speed of 40 km/h and returns back to the town A with a speed of 60 km/h. The average speed of the car during the complete journey is - (a) 48 km/h (b) 50 km/h (c) zero
10. The initial velocity of a body is u . It is under uniform acceleration. Its velocity v at any time is given by - (a)  $v = u + at^2$  (b)  $v = u + \frac{1}{2} at^2$  (c)  $v = u + at$  (d)  $v = u$ .
11. The distance covered in time by a body having initial velocity u and having a uniform acceleration is given by  $s = ut + \frac{1}{2} at^2$ . This result follows from -(a) Newton's first law (b) Newton's second law (c) Newton's third law
12. A ball is thrown vertically upwards. It rises to a height of 50 m and comes back to the thrower,(a) the total distance covered by the ball is zero. (b) the net displacement of the ball is zero.(c) the displacement is 100
13. In 12 minutes a car whose speed is 35 km/h travels a distance of(a) 7 km (b) 3.5 km (c) 14 km (d) 28 km
14. When a graph of one quantity versus another results in a straight line, the quantities are -(a) both constant (b) equal (c) directly proportional (d) inversely proportional
15. A body moving along a straight line at 20 m/s undergoes an acceleration of -4 m/s<sup>2</sup>. After two seconds its speed will be -(a) -8 m/s (b) 12 m/s (c) 16 m/s (d) 28 m/s.
16. A car increases its speed from 20 km/h to 30 km/h in 10 seconds. Its accelerations(a) 30 m/s<sup>2</sup> (b) 3 m/s<sup>2</sup> (c) 18 m/s<sup>2</sup> (d) 0.83 m/s<sup>2</sup>
17. A body whose speed is constant(a) must be accelerated (b) might be accelerated (c) has a constant velocity (d) cannot be accelerated.
18. When the distance that an object travels is directly proportional to the length of time it is said to travel with(a) zero velocity (b) constant speed (c) constant acceleration (d) uniform velocity
19. a particle moves with uniform positive acceleration. Its velocity-time graph will be
  - (a) a straight line parallel to the time axis
  - (b) a straight line inclined at an obtuse angle to the time axis
  - (c) a straight line inclined at an acute angle to the time axis
  - (d) none of these.

20. Q.15: A particle experiences constant acceleration for 20 seconds after starting from rest. If it travels a distance  $s_1$  in the first 10 seconds and distance  $s_2$  in the next 10 seconds then, (a)  $s_2 = s_1$  (b)  $s_2 = 2s_1$  (c)  $s_2 = 3s_1$  (d)  $s_2 = 4s_1$
21. In which of the following cases the object does not possess an acceleration or retardation when it moves in (a) upward direction with decreasing speed (b) downward direction with increasing speed (c) with constant speed along circular path (d) with constant speed along horizontal path
22. A person travels distance  $R$  along the circumference of a circle of radius  $R$ . Displacement of the person is (a)  $R$  (b)  $2R$  (c)  $2\sqrt{2}R$  (d) zero
23. The velocity of an object is directly proportional to the time elapsed. The object has (a) uniform speed (b) uniform velocity (c) uniform acceleration (d) variable acceleration

19. A magnet is repeatedly moved closely over a mixture of iron powder and sulphur powder. Which of the following is not observed?

- (a) Iron powder is attracted towards magnet (b) sulphur powder is left behind  
(c) black powder is left behind (d) iron powder and sulphur powder are separated
20. The colour of magnesium ribbon is  
(a) grayish white (b) brown (c) black (d) grayish black
21. While heating ammonium chloride and sodium chloride mixture, keep your face away from vapours because:  
(a) chlorine vapours may cause irritation in eyes (b) ammonia vapours may cause irritation in eyes  
(c) sodium chloride vapours may cause irritation in eyes (d) ammonium chloride vapours may block nose
22. In which of the following you observed that the particles settle down on standing?  
(a) common salt solution (b) muddy water  
(c) starch solution (d) egg albumin in water
23. To prepare a colloidal solution of starch, we should:  
(a) add starch powder to boiling water and cool (b) add starch powder to cold water and boil  
(c) heat starch, add it to cold water and then bring it to boil (d) add thin paste of starch to hot water with stirring
24. A mixture of iron filings and sulphur is heated, the colour of the mixture will change:  
(a) black to yellow (b) yellow to black (c) black to brown (d) brown to yellow
25. The colour that indicates that dal is adulterated with methanol yellow is:  
(a) crimson (b) pink (c) red (d) brown
26. To observe onion cells in an onion peel, we must prepare the slide by mounting on it:  
(a) crushed pulp of onion (b) dry scale leaf  
(c) green leaf of onion (d) thin layer of fleshy leaf of onion
27. When we determine the boiling point of liquid, the thermometer  
(a) should dip into liquid (b) should be above the liquid and vertical  
(c) should touch the bottom of container (d) should be placed slanting in the liquid
28. A blue black colour precipitate with iodine solution indicates the presence of :  
(a) Glucose (b) Protein (c) Fat (d) Starch
29. The aqueous solution of salt and sand can be separated by  
(a) Filtration followed by evaporation (b) Filtration followed by crystallization  
(c) Sublimation (d) Melting
30. The structure responsible for receiving impulse in a nerve cell is:  
(a) Dendrite (b) Axon (c) Cell body (d) Nucleus

#### SECTION- B

1. Which process is used in washing machine to squeeze (rinse) water from clothes?
2. Name the types of simple tissues.
3. What is the value of 'g' at the centre of earth?
4. Name the physical quantity corresponds to rate of change of momentum.
5. What do you mean by saturated solution?
6. Why does our palm feel cold when we put some acetone or petrol on it?
7. Give two reasons to support that water is a compound and not a mixture.
8. If the moon attracts the Earth, why does the earth not move towards the moon?
9. Explain why some of the leaves may get detached from a tree if we vigorously shake its branch?
10. What are the values of distance and displacement in covering 10 m from P to Q and coming back?

11. State any two conditions necessary for good health.
12. What are functions of stomata?
13. Which organelle is known as the powerhouse of the cell? Why?
14. Differentiate between mixture and compound.
15. What is chromatography? Write its any two applications.
16. A solution contains 5 ml alcohol in 70 ml of water. Calculate the volume by volume percentage of solution.
17. Write the differences between mass and weight.
18. From a rifle of mass 4 kg, a bullet of mass 50 g is fired with an initial velocity of 35 m/s. Calculate the initial recoil velocity of the rifle.
19. Why is it difficult to hold a school bag having strap made of thin and strong string?
20. Draw a labeled diagram of neuron.
21. What is immunization ? What are the immunization programs available at the nearest health centre in your locality?
22. Differentiate between osmosis and diffusion.
23. Write the differences between solid, liquid and gas.

Or

What is fractional distillation? When it is used? Explain with an activity.

1. What are the characteristics of particles of matter?
2. A sponge can be pressed easily, still it is called a solid. Why?
3. Differentiate solids liquids and gases on the basis of (a) diffusion , (b) density.
4. Solids are denser as compared to liquids , still ice floats on water. Explain.
5. Define Latent heat of fusion.
6. Why does water vapour has more energy than water at same temperature?
7. How can gases be liquefied?
8. List four factors which affect the rate of evaporation.
9. Name and define the fourth and fifth state of matter.
10. Why does a desert cooler cool better on a hot, dry day?
11. Why does temperature remain constant during the boiling of water even though heat is supplied continuously?
12. What is the chemical name of Dry Ice? Why is it called dry ice?
13. What are alloys? Is it a mixture or a compound? Give reasons.
14. List four reasons to support that water is a compound and not a mixture.
15. Distinguish between homogeneous and heterogeneous mixture. Classify the following mixtures as homogeneous or heterogeneous-
  - i) Tincture of iodine
  - ii. Smoke
  - iii. Brass
  - iv. Sugar solution
16. Distinguish between true solution, suspension and colloid on the basis of stability, filterability and type of mixture.
17. How will you prepare a 10% solution of glucose in water?
18. Identify the physical and chemical changes from the following:-
  - i) Burning of magnesium in air
  - ii) Tarnishing of silver spoon
  - iii) Sublimation of iodine

iv) Electrolysis of water

19. State one similarity and one difference between evaporation and boiling.
20. Explain the following giving examples: (a) Saturated solution, (b) Pure substance, (c) Colloid, (e) Suspension.
21. How would you confirm that a colourless liquid given to you is pure water?
22. Which of the following will show "Tyndall effect"?  
(a) salt solution (b) milk (c) copper sulphate solution (d) starch solution.
23. Action of heat on blue vitriol is a physical as well as chemical change. Justify.
24. How can you prove that air is a mixture?
25. What is the concentration of a solution in terms of mass percentage if it contains 20 g of a salt in 250 g of water?

26. Fill in the blanks:-

1. Particles of matter are continuously moving, so they possess \_\_\_\_\_.
2. The melting point of ice is \_\_\_\_\_.
3.  $293\text{ K} = \text{_____}^\circ\text{C}$ .
4. The concentration of a solution is the amount of \_\_\_\_\_ present in a given volume of solution.
5. \_\_\_\_\_ is the only metal which is liquid at room temp.
6. \_\_\_\_\_ mixtures have uniform composition.
7. S.I. unit of latent heat of melting is \_\_\_\_\_.
8. Rate of evaporation \_\_\_\_\_ when surface area of liquid is increased.
9. Particles of matter have \_\_\_\_\_ between them.
10. Soil and minerals are not \_\_\_\_\_ substances.
11. \_\_\_\_\_ number of elements occur in nature.
12. \_\_\_\_\_ is a non-metal which is liquid at room temperature.