

## Class 9-SA-1-TEST-3

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### SECTION A

- 1- What does the odometer of an automobiles measure?
- 2- Name two processes which provide the best evidence for the motion of particles in matter.
- 3- What are the functions of stomata?
- 4- Under what condition is the magnitude of average velocity of an object equal to its average speed?
- 5- 9.72 g of potassium chloride dissolves in 30g water at 70C? Calculate the solubility of potassium chloride at that temperature?
- 6- What is pasturage and how it is related to honey production?
- 7- What is the importance of universal law of gravitation?
- 8- (a) What is the quantity which is measured by the area occupied below the velocity time graph?  
  
(b)A train starting from rest attains a velocity of 72km/h in 5 minutes. Assuming that the acceleration is uniform, find out the (i) acceleration and (ii) the distance travelled by the train for attending this velocity?
- 9- (a) Explain why is difficult for a fireman to hold a house , which eject large amounts of water at a high velocity?  
  
(b)A bullet of mass 10g travelling horizontally with a velocity of 150m/s strikes a stationary wooden block and comes to the rest in 0.03s. Calculate the distance of penetration of the bullet into the block. Also calculate the magnitude of the force exerted by the wooden block on the bullet.
- 10- (a) why is the weight of an object on the moon  $1/6^{\text{th}}$  its weight on the earth?

(b) A block of wood is kept on a tabletop. The mass of wooden block on the table top if it is made to lie on the tabletop with its side of the dimension (i) 20cm X 10cm and (ii) 40cm X 20cm.

11- (a) What is evaporation? State the various factors?

(b) Convert the temperature of 373k in degree Celsius.

12- Define the following melting point, condensation, sublimation and latent heat?

13- (a) What is chromatography? State the various factors?

(b) What type of mixture is separated by the process of crystallization.

14- (a) Define solubility of a substance. How does it vary with temperature?

(b) What is the name of the process due to which dry ice changes into carbon dioxide gas.

15-

(a) Why is cell called the structural and functional unit of life?

(b) What would happen to the life of the cell if there is no golgi apparatus?

16- What are muscular tissues? Differentiate between its three types?

17-

(a) What is composite fish culture? Write its advantages?

(b) How good animal husbandry practices do benefits farmers?

18-

(a) Compare the use of manure and fertilizers in maintaining soil fertility?

(b) What factors may be responsible for losses of grains during storage?

19-

(a) Define matter? What are there different characteristics of particles of matter? Explain any 2.

(b) What is Brownian motion? Explain?

(c) Why is ice at 273k more effective in cooling than water at that temperature?

- (d) Give two reasons that wood is a solid.
- e) Differentiate between colloid, suspension and solution.
- f) Explain how, nitrogen, oxygen and argon gases are separated from air.
- g) How would you confirm that a colorless liquid given to you is pure water?
- h) How is ammonia gas liquefied

20-

- (a) What is meristematic tissues? Write its types?
- (b) What is the function of areolar tissue?
- (c) How are simple tissues different from the complex tissue in plants?
- (d) Draw a labeled diagram of neuron?

**OR**

- a) How does amoeba obtain its food?
- b) What is a difference between prokaryotic cells and eukaryotic cells?
- c) How do substances like CO<sub>2</sub> and water move in and out of the cell? Discuss?
- d) Name the two organelles that contain their own genetic material?

21-

- (a) What are desirable characters of the bee varieties suitable for honey production?
- (b) What are the desirable agronomic characteristics for crop improvement?
- (c) How do biotic and abiotic factors affect crop production?
- (d) Which method is commonly used for improving cattle breeds and why?

## **SECTION B**

22- What is the physical state of water

- a) 25C
- b) 0C
- c) 100C
- d) 273C

23- Which of the process/ processes release heat?

- a) 285K

- b) 288K
- c) 185K
- d) 361K

24- Which of the following factors are responsible for the change in the state of solid carbon di oxide when kept exposed to air:

- a) Increase in pressure
- b) Increase in temperature
- c) Decrease in pressure
- d) Decrease in temperature

25- Which of the following show tyndall effect?

- a) Salt solution
- b) Milk
- c) Copper sulphate solution
- d) Starch solution

26- Which of the following mixture cannot be separated by using water as the solvent?

- a) Copper sulphate and sand
- b) Sand and potash alum
- c) Sand and sulphur
- d) Sugar and sand

27- Which of the following is true for displacement?

- a) It cannot be zero
- b) Its magnitude is less than the distance travelled by the object
- c) Its magnitude is greater than the distance travelled by the object
- d) None of these

28- A bullet of mass 0g is horizontally fired with a velocity 150m/s from a pistol of mass 2kg. what is the recoil velocity of the pistol?

- a) -1.5m/s
- b) -2.5m/s
- c) 1.5m/s

d) 2.5m/s

29- What is the momentum of an object of mass  $m$  moving with a velocity  $v$ ?

- a)  $(mv)^2$
- b)  $Mv^2$
- c)  $1/2mv^2$
- d)  $Mv$

30- A batsman hits a cricket ball which then rolls on a level ground. After non covering a short distance, the ball comes to rest. The ball slow to a stop because

- a) The batsman did not hit the ball hard enough.
- b) Velocity is proportional to the force exerted on the ball.
- c) There is a force on the ball opposing the motion
- d) There is no unbalanced force on the ball, so that the ball would want to come to rest

31- Nucleolus is a seat of

- a) Protein synthesis
- b) Ribosome synthesis
- c) Enzyme synthesis
- d) mRNA synthesis

32- A cell placed in solution swell up. The solution is

- a) Hypertonic
- b) Isotonic
- c) Hypotonic
- d) Both A and B

33- Spinal cord and brain are made up of

- a) Muscular tissue
- b) Nervous tissue
- c) Cardiac tissue
- d) None of the above

34- The dead element present in the phloem is

- a) Sieve tubes
- b) Companion cell
- c) Phloem fibers
- d) Phloem parenchyma

35- Drones in the honey bee colony are burnt out from

- a) Unfertilized egg
- b) Fertilized eggs and well-nourished larvae
- c) Same as worker bee
- d) Fertilized egg giving heat treatment

36- The elements which is required by the plants in largest quantity is

- a) Sulphur
- b) Calcium
- c) Phosphorus
- d) Nitrogen