SAMPLE QUESTION PAPER 2015

SUMMATIVE ASSESSMENT – I, 2015 SCIENCE Class – IX

SECTION –A

Question numbers 1 to 3 in Sections-A one mark questions

1. State any one function of Golgi apparatus.

2. Mention the quantity shown by the slope of a speed ☐ time graph.

3. What is the magnitude of the gravitational force acting on a body of mass 'x' ?

Question numbers 4 to 6 in Sections-A are two marks questions

4. How is heating of sugar and heating of ammonium chloride different from each other ? Explain your answer.

5. Mention the different components of blood ?
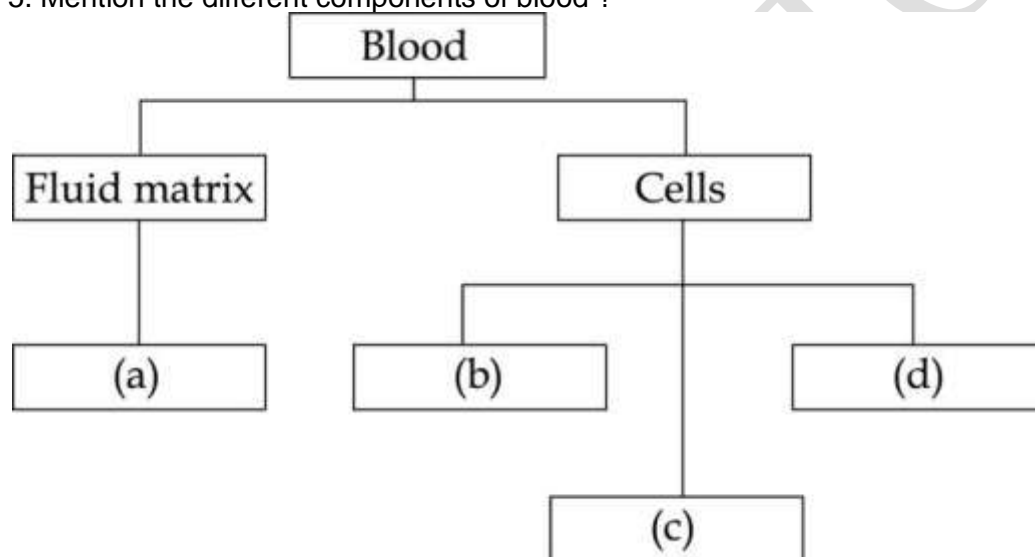
6. A car of mass 2400 kg moving with a velocity of 20 ms☐ 1 is stopped in 10 s on applying brakes. Calculate the negative acceleration and the resultant force.

Question numbers 7 to 18 in Sections - A are three marks questions

7 (a) After winters people pack off their woollens by keeping Napthalene balls in them. With passage of time these balls becomes smaller in size. Why does this happen ? What type of change is involved during this process ?

(b) How can you convert a saturated solution into an unsaturated solution ?

8. (a) Comment on the statement 'Evaporation Causes Cooling'

(b) Why we feel cool when we pour acetone on our palm.

9. (a) Write any two differences between a chemical change and a physical change.

(b) State one instance in which water undergoes a physical and one in which it undergoes a chemical change.

10. Grass looks green, papaya appears yellow. Which is the cell organelle responsible for this ? Write the structural features of this organelle.

11.(a) Differentiate between epidermal and cork cells. (b) Why are they called protective tissues ?

12. A car travelling at constant velocity, passes a stationary motor cycle at a traffic light. As the car overtakes the motorcycle, the motorcycle accelerates uniformly from rest for 10 s. The following displacement-time graph represents the motions of both vehicles from the traffic light onwards.
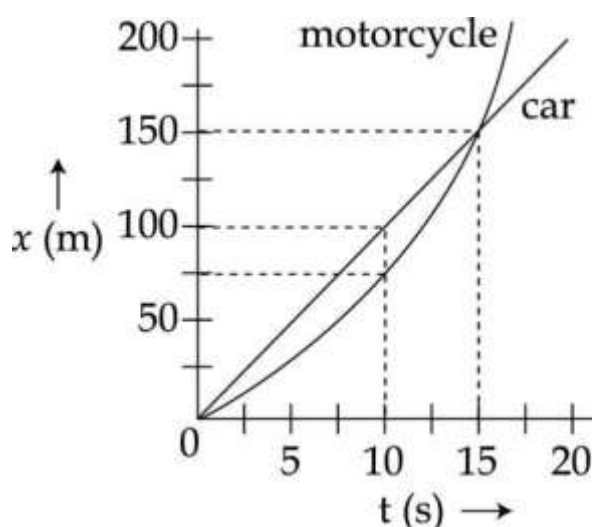
(a) Use the graph to find the magnitude of the velocity of the car.

(b) How long (in seconds) it will take the motorcycle to catch up with the car.

(c) How far behind the car will be the motorcycle after 10 s ?

13 Neha swims in a 100 m long pool. She covers 200 m in one minute and forty seconds by swimming from one end to the other and back along the same straight path. Find the average speed and average velocity of Neha.

14. Show that the acceleration due to gravity at the surface of the moon is about 1/6 of that at the surface of the earth (Me= 5.98×10^{24} kg, Mm = 7.36×10^{22} kg,) (Re = 6.37×10^6 m, Rm = 1.74×10^6 m)

15. Two students were arguing, Sohan says that this bottle will have a greater inertia if rolled with a greater speed. Mohan disagrees and says that speed does not make any different in inertia. Whom do you agree with? Which physical quantity is wrongly referred to?

16. Name a type of motion where an object does not change its speed but its direction of motion changes continuously. Calculate the speed of the tip of second's hand of a watch of length 1.5 cm.

17. When Ratan came to his native village after passing class X, he talked to panchayat and told them the advantage of growing crops with animal husbandary that can benefit farmers. The village panchayat shared

the information so that it can be implemented on a large scale. They set up a village dairy where milk from all the houses was collected and then marketed to the nearby town.

(i) What can be done to increase the milk output of dairy animals ?

(ii) Name two exotic breeds of cattle known for their long lactation period.

(iii) What values are promoted by Ratan who shared the information ?

18. Mention three methods which can be adopted for a sustained livelihood.

Question numbers 19 to 24 in Section -A are five marks questions.

19. Compare in a tabular form, the smell of perfume and petrol on the basis of the following properties :

(a) Shape   (b) Fludity   (c) Volume   (d) Compressibility   (e) Forces of attraction

20. Define the term – solution. Identify the solute and solvent in the following solutions –

(i) Tincture of iodine   (ii) Polluted air   (iii) soda water   (iv) Dilute Hydrochloric acid

21. (i) Define tissue. What is the utility of tissues in multicelluler organisims ?

(ii) Are plant and animals made of same types of tissues? If no, then. Write three points of difference.

22. (a) Prove that if the earth attracts two bodies placed at the same distance from the centre of earth, with equal force; then their masses will be the same.

(b) Mathematically express the acceleration due to gravity that is expressed by a free falling object.

(c) Why is 'G' called a universal constant ?

23. (a) Derive the equation of motion, $2as = v^2 - u^2$ by graphical method.

(b) Which of the following distance-time graphs is possible ? Give reason for your answer.
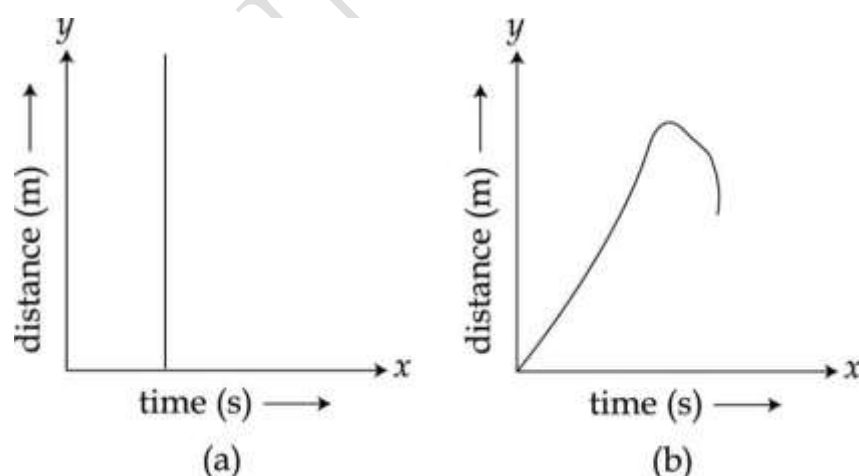
24.Describe briefly about the traits and their utilities important for a cereal crop in improvement of varieties.

Question numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question.

25. Glycogen is a stored form of carbohydrates found in :

(a) cereals   (b) pulses   (c) animals   (d) fruits

26. The presence of starch can be shown in which food material and using which reagent :

(a) apple juice and Iodine solution   (b) potato extract and safranin

(c) apple juice and safranin   (d) potato extract and Iodine solution.

27. A mixture containing iron filings and sulphur powder is spread on the white paper and a magnet is rolled in it. The particles which cling to the magnet are :

(a) Sulphur   (b) Iron particles

(c) Iron sulphide   (d) Mixture of iron and sulphur

28. Four students were asked to observe the effect of heat on Iron sulphide. The teacher provided them with test tubes, holders and solid Iron sulphide. The students then started heating iron sulphide as shown below. The teacher stopped three of them for using wrong procedures. The correct way of heating is shown in setup :

(I)   (II)   (III)   (IV)

(a) I   (b) II   (c) III   (d) IV
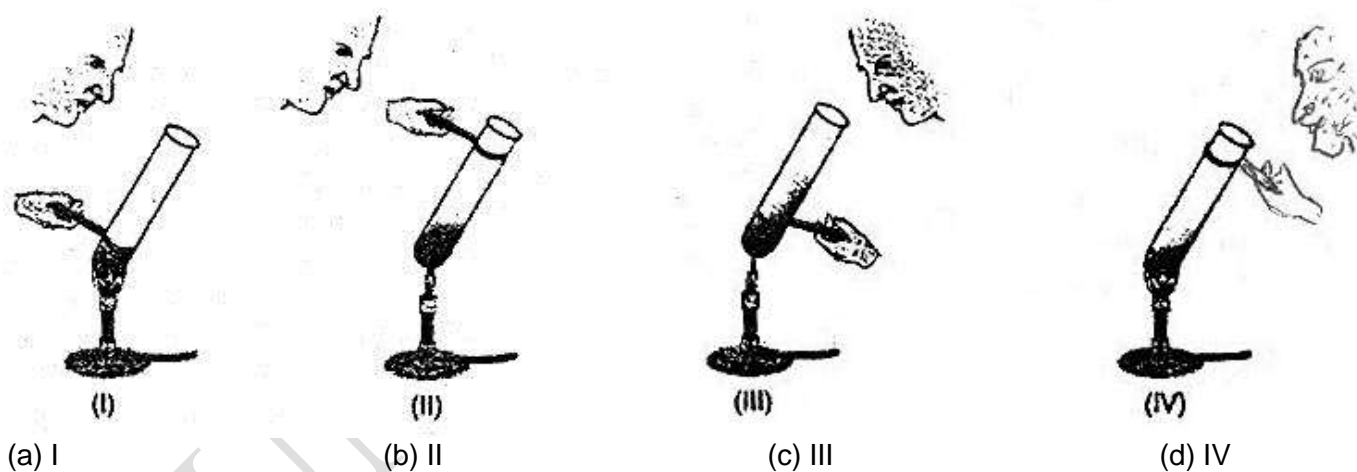
29. A colourless gas was evolved when zinc granules were added to dilute sulphuric acid. Which of the following are the characteristics of gas evolved ?

(a) It is a pungent smelling gas that burns with a pop sound.

(b) It is a reddish brown gas that burns with cracking sound.

(c) It is a supporter of combustion.

(d) It is odourless gas that burns with a pop sound.

30. You are viewing a prepared slide of a temporary mount of cells under high magnification microscope. You would observe :

(a) More number of cells, large size

(b) Less number of cells, large size

(c) Less number of cells, small size

(d) More number of cells, small size

31. Intercellular space in the given diagram of parenchyma tissue is marked by the arrow :-
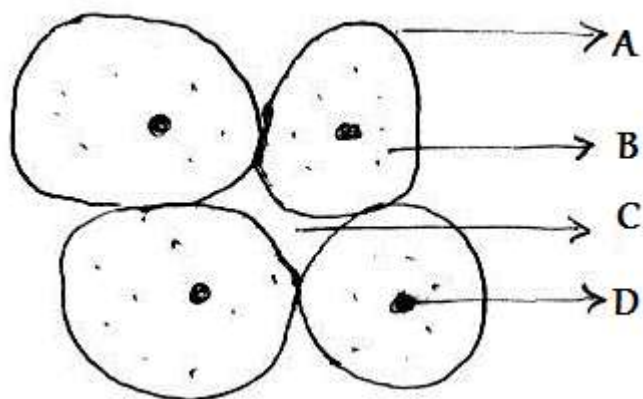
(a) A   (b) B   (c) C   (d) D

32 . A mixture contains two solids A & B. Only A sublimes, both A & B dissolve in water. A student is asked to separate A and B. The method he applies is :

(a) filtration followed by evaporation

(b) evaporation only

(c) sublimation only

(d) decantation

33. A body is accelerated if:

(a) Balanced force acts on it

(b) Unbalanced force acts on it

(c) No force acts on it

(d) Frictional force acts on it

34. Identify two clear and transparent solutions from the following mixtures:-

(a) milk and water   (b) sugar and water

(c) chalk powder and water   (d) starch powder and water

(e) glucose and water

35. Students A, B and C used distilled water at 00C, at room temperature and luke warm respectively. Compare the boiling point of water observed by the three students and give reason for . To find the boiling point of water, three your answer.

36. A student recorded the mass of dry raisins as 3g and the mass of raisins after soaking in water as 4.8g. Calculate the percentage of water absorbed by raisins.