CLASS IX SCIENCE FULL LENGTH TEST

M.M.: 75 **TIME: 2½ HRS.**

General Instructions.

(i) All questions are compulsory.
(ii) There is no overall choice.
(iii) All questions of section A and all questions of Section B are to be attempted separately.
(iv) Question numbers 1 to 3 are one mark question. These are to be answered in one word or one sentence.
(v) Question numbers 4 to 6 are two marks questions, to be answered in about 30 words.
(vi) Question numbers 7 to 18 are three marks questions, to be answered in about 50 words.
(vii) Question numbers 19 to 24 are five mark questions, to be answered in about 70 words.

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1. State the location of lateral meristematic tissue.

2. A ball is thrown vertically upwards. What is its momentum at the highest point?

3. Mention the major disadvantage of composite fish culture.

4. Give reason for the following observations :

a. Naphthalene balls disappear with time without leaving any solid.

b. We can get the smell of perfume sitting several meters away.

5. How do vegetables remain fresh on being sprinkled with water? Explain.

6. Gravitational force on an imaginary planet is 6 times stronger than the gravitational force of the earth. Determine the value of acceleration due to gravity and weight of an object of mass 50 kg on that planet.

7. List any four properties of solution. Give any two examples of solid in liquid solutions.

8. Two students A and B were given 10 ml water in a bowl and a plate respectively. They were told to observe the rate of evaporation. Name the student whose water evaporates faster and explain reason for it.

9. Aarushi's mother always squeezes water from wet clothes in the spinner of washing machine and then uses it to clean the floor.

a. Write the principle of the technique used in the above mentioned process.

b. Write one more application of this technique.

c. What do you learn from Aarushi's mother?

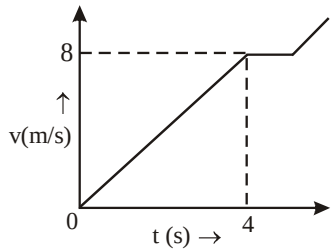
10. Identity the type of tissues in the following :

a. Vascular bundle b. Inner lining of the intestine c. Lining of kidney tubule

d. Iris of the eye e. Muscles of the heart f. Bronchi of lungs

11. Animal tissues are different from plant tissues. State reason.

12. The following velocity-time graph describes the motion of a truck :



a. Explain the motion of the truck according to the graph.

b. Calculate displacement and the acceleration of the truck in 0 to 4 s.

13. When can we say the motion of an object as uniform motion?

What can be the shape of the path covered by a moving object to have uniform speed and uniform velocity?

14. Two solid objects of masses 1 kg and 2 kgs are dropped from a helicopter at the same time. Which one will reach the ground earlier? Justify your answer with suitable reason.

15. a. State the law of conservation of momentum.

b. A mass of 200 kg is accelerated uniformly from a velocity of 10 ms^{-1} to 16 ms^{-1} in 12s.

Calculate the initial and final momentum of the object and the force that brings about this change.

16. Why should we choose strains of crops with wider adaptability?

17. "Crop should be resistant to biotic and abiotic factors which can improve production". Mention three biotic and three abiotic factors which affect the production of crops.

18. Give two examples in each case :

a. Exotic breeds of cow

b. Indigenous breeds of cow

c. Indigenous and exotic breeds of poultry birds.

19. a. List any two properties that liquids have in common with gases.

b. Give two reasons to justify that an Iron almirah is a solid at room temperature.

c. What happens to the heat energy which is supplied to the solid once it starts melting.

20. a. Draw a neat and labelled diagram of the apparatus used to separate components of blue black ink. Name the process and state the principle involved.

b. Identity the physical and chemical changes from the following :–

(i) Electrolysis of water. (ii) Burning of magnesium in air.

(iii) Mixing of iron filings and sulphur powder. (iv) Sublimation of camphor

21. List three functions of epidermis. What changes take place in epidermis tissue as the plant grows older?

22. a. From Newton's second law of motion obtain a mathematical expression for force.

b. (i) When a carpet is beaten with a stick, dust comes out of it. Explain.

(ii) Stepping down from a moving bus is dangerous. Why?

23. a. Draw a velocity time graph for an object in uniform motion. Show that the slope of the velocity-time graph gives the acceleration of the object.

b. An aeroplane starts from rest with an acceleration of 3 ms^{-2} and takes a run for 35 s before taking off. What is the minimum length of the runway and with what velocity the plane took off?

24. (i) Explain the various cropping patterns adopted by farmers. Mention the basis of selection of crops.

(ii) Write one advantage of any two crop patterns.