

SUMMATIVE ASSESSMENT - I, 2015-16

SCIENCE

Class - IX

Time Allowed : 3 hours

Maximum Marks : 90

General Instructions :

1. The question paper comprises of **two Sections, A and B**. You are to attempt both the sections.
2. **All** questions are **compulsory**
3. **All** questions of **Section-A** and **all** questions of **Section-B** are to be attempted separately.
4. Question numbers **1 to 3** in **Section-A** are **one mark** questions. These are to be answered in **one word** or in **one sentence**
5. Question numbers **4 to 6** in **Sections-A** are **two marks** questions. These are to be answered in about **30 words** each.
6. Question numbers **7 to 18** in **Section-A** are **three marks** questions. These are to be answered in about **50 words** each
7. Question numbers **19 to 24** in **Section-A** are **five marks** questions. These are to be answered in about **70 words** each.
8. Question numbers **25 to 33** in **Section-B** are multiple choice questions based on practical skills. Each question is a **one mark** question. You are to select one most appropriate response out of the four provided to you.
9. Question numbers **34 to 36** in **Section-B** are questions based on practical skills. Each question is of **two marks**.

SECTION-A

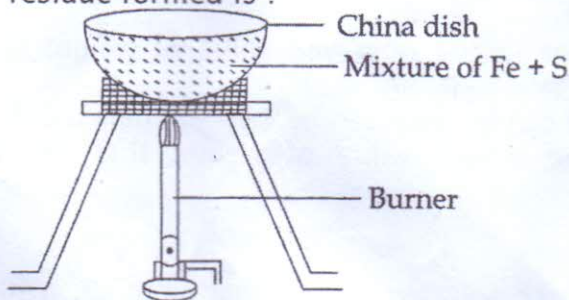
- | | | |
|---|--|---|
| 1 | Name the cell organelle which provides an area for ATP generating reactions. | 1 |
| 2 | If the weight of a body on the earth is 6 N, what will it be on the moon ? (Given that acceleration due to gravity on moon is one sixth of that on the earth) | 1 |
| 3 | What is the numerical ratio of average velocity to average speed of an object when it is moving along a straight path? | 1 |
| 4 | Explain the following giving examples :
(a) saturated solution (b) unsaturated solution | 2 |
| 5 | How is striated squamous epithelial tissue different from squamous epithelial tissue ? | 2 |
| 6 | (a) How force of a body depends upon its mass ?
(b) In which case the force applied will be more by a car or a truck, if both are moving with the same velocity ? | 2 |
| 7 | Explain what are metalloids? Give two examples. | 3 |
| 8 | (a) A sponge can be compressed, yet it is a solid why ? Explain.
(b) Name the state of matter that has minimum space between particles. | 3 |

- 9 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. 3
- 10 Name the stain used to prepare slides like that of onion peel and human cheek cell. Why is the use of stain necessary? Are all the organelles stained equally? 3
- 11 What are the three types of simple permanent tissues? Specify the type of cells they are made up of, their functions and location. 3
- 12 What do you understand by momentum? A vehicle is running with a velocity of 5 m/s. If the momentum of the vehicle is 5000 kgm/s. What is its mass? 3
- 13 A boy on a 78.4m high cliff drops a stone. One second later, he throws another stone downwards with some speed. The two stones reach the ground simultaneously. Find the speed with which the second stone was thrown. 3
- 14 Define uniform circular motion. A particle is travelling in a circle of diameter 15 m. Calculate the distance covered and the displacement when it completes two rounds. 3
- 15 Define inertia? What determines the inertia of a body? Between a foot ball and a rock of same size which will have more inertia? 3
- 16 (i) If the force of gravity on Mars is 3.8 ms^{-2} , then what would be the weight of an object on mars which has a mass of 10kgs on earth? 3
(ii) What would be its weight on earth?
(iii) From the above data, analyse what will be the percentage difference of your weight on earth and on mars?
- 17 A farmer had a plot just beside the bank of a river. Each time his Kharif crops, got damaged due to floods. He consulted the agricultural scientist who gave him a special variety of seeds and also advised him to practice fish farming. 3
(i) What was the specialty of seed grains given to him?
(ii) What name can be given to this type of fish farming?
(iii) How the farmer was benefitted by the advice of agricultural scientist?
- 18 Give the term used for rearing and caring of animals livestock. Explain three major aspects of this practice. 3
- 19 (a) Draw a flow chart to get liquid oxygen from air. 5
(b) Briefly describe the structure and function of fractionating column.\
- 20 (a) Explain why temperature remains constant during inter conversion of states of matter. 5
(b) "Sublimation does not require heating". Is this statement true? Justify your answer.
- 21 (a) Define tissue. What is the importance of tissues in multicellular organisms? 5
(b) Are plants and animals made of same types of tissues? If no, then. Write three points of difference.

- 22 (a) Freely falling body is the example of non-uniform motion. Explain this statement with reason. How much change occurs in velocity in 1 s? 5
 (b) A particle is moving along a circular path of radius r with uniform speed. Draw the directions of velocity of the particle, when it is instantaneously at point P. If the radius of circular path is r , and it takes t second to complete one round, find relation for its circular velocity. Give its two examples.
- 23 Explain recoiling of gun on the basis of Newton's Third Law of Motion. 5
 A bullet of mass 20 g is horizontally fired with a horizontal velocity 150 ms^{-1} from a pistol of mass 2 kg. Calculate the recoil velocity of the pistol.
- 24 In a fresh water composite fish culture, mention the basis of selection of varieties of fishes. Name any four varieties of fishes selected along with their feeding zones. Write one advantage and one problem of composite fish culture. 5

SECTION - B

- 25 The reagent with which metanil yellow dissolved in water gives pink colour is : 1
 (a) conc. hydrochloric acid (b) conc. sulphuric acid
 (c) conc. nitric acid (d) conc. sodium hydroxide
- 26 The food groups whose food stuffs will turn blue black when treated with iodine solution is : 1
 (a) bread, wheat, corn flour (b) dal, fish, meat
 (c) salt, sugar, baking soda (d) orange, lemon, apple
- 27 On heating a mixture of Iron filings and sulphur powder in a china dish, colour of residue formed is : 1



- (a) grey (b) yellow (c) black (d) reddish

- 28 Sample 'X' is a mixture of iron filings and sulphur and sample 'Y' is the substance obtained by heating sample 'X' strongly. Sample 'X' and 'Y' are separately shaken with carbon disulphide in two different test tubes. Which of the following is the correct set of observations? 1
 (a) 'X' is insoluble and Y is partly soluble.
 (b) 'X' is partly soluble and Y is insoluble.
 (c) 'X' is soluble and Y is partly soluble.
 (d) 'X' is insoluble and Y is soluble.

- 29 Take a small quantity of dil sulphuric acid in a conical flask and add a few granules of zinc to it. Bring a wet blue and red litmus paper near the mouth of the flask one by one. We will observe that : 1
- (a) Blue litmus turns red
 - (b) Red litmus turns blue
 - (c) Colour of blue and red litmus paper does not change
 - (d) Colour of both the blue and red litmus paper change.

- 30 Ashish, on observing human cheek cells under the microscope, found : 1
- (a) Flat, rectangular cells with no intercellular spaces, prominent nucleus
 - (b) Flat, polygonal cells without intercellular spaces, prominent nucleus
 - (c) Rounded, polygonal cells with intercellular spaces, prominent nucleus
 - (d) Flat, polygonal cells with intercellular spaces, prominent nucleus



- Part of nerve cell has been drawn here. The correct labelling for 'A' is :
- (a) cilia
 - (b) flagella
 - (c) tentacles
 - (d) dendrites

- 32 A mixture contains iodine, ammonium chloride and sand. Only iodine and ammonium chloride sublimate. Only iodine dissolves in carbon tetra chloride. How will you separate the three components? Sequence of steps will be : 1
- (a) Sublimation, addition of CCl_4 .
 - (b) Addition of CCl_4 , filtration, sublimation.
 - (c) Sublimation, addition of H_2O , filtration.
 - (d) evaporation, distillation, crystallization.

- 33 Range of a spring balance is : 1
- (a) the correction that needs to be done in the observed value of weight in a spring balance
 - (b) the smallest difference in weight that can be detected by a spring balance
 - (c) the difference between highest and lowest value of weight that can be measured with a spring balance
 - (d) none of the above

34 You are given two aqueous solutions - a starch solution and a sugar solution. Which one will show Tyndal effect? Why? 2

35 Kaushal learnt how to determine the boiling point of water in his school laboratory. When he went to Leh in summer vacations he found that there the water boiled at a temperature lower than the boiling point he observed in his school laboratory. How would you explain this? 2

36 Write the formula for determining the percentage of water absorbed by raisins? State one important precaution for this experiment. 2