Class9 Science Sample Question Paper 2017-18

Time allowed: 03 Hours Science Class – IX Maximum Marks: 80

Instruction:

(i) Question numbers 1 and 2 in Section-A are one mark question. They are to be answered in one word or in one sentence.

(ii) Question numbers 3 to 5 in Section- A are two marks questions. These are to be answered in 30 words each.

(iii) Question numbers 6 to 15 in Section-A are three marks questions. These are to be answered in about 50 words each.

(iv) Question numbers 16 to 21 in Section-A are 5 marks questions. These are to be answered in 70 words each.

(v) Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question. These are to be answered in brief

(vi) There is an internal choice in two questions of three marks each and one question of five marks.

Section-A

Question numbers 1 and 2 in Section-A are one mark question

1. Pick the odd one out from: Golgi apparatus, Endoplasmic Reticulum (E.R), Cytoplasm, Lysosomes. Give suitable reason for your selection.

2. What is the cell wall of fungi made up of?

Question numbers 3 to 5 in Section- A are two marks questions

3. Name the tissue present in the hard covering of seeds. Which chemical is responsible for making this tissue hard ?

4. “All the object in the universe attract each other" (a) What is this force of attraction called as ? (b) Name any two factors on which this force of attraction depends.

5. The speed of sound in water is 1500 m/s. How far away from an under-sea rock should a diver be so that he can hear his own echo ?

Question numbers 6 to 15 in Section-A are three marks questions

6. .(a) Both helium and beryllium have two electrons in the valence shells. Helium is a noble gas whereas Beryllium is a metal, justify. (b) Hydrogen exists in three isotopic forms. Why are the isotopes of hydrogen chemically alike?

7. Differentiate between 'Healthy and Disease Free' in terms of (i) nature of body functioning (ii) level of considerations.

8. Give any two differences between angiosperms and gymnosperms giving one example of each.

9. A ship sends out ultrasound, produced by transmitter that returns from the sea-bed and detected after 3 sec. If the speed of ultrasound through sea water is 1530 m/s., find the distance of the sea-bed from the ship.

10. State Archimede's Principle. Explain its two applications.

11. Give two feature of following :(i) tissue that store fat (ii) tissue that stimulate impulses (iii) tissue that control contraction and relaxation of heart

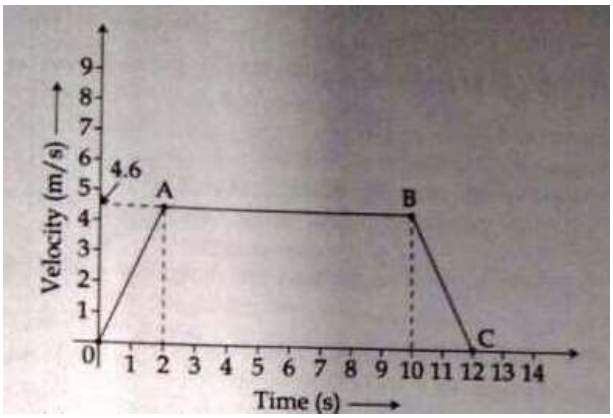
Or, Answer the following questions on the basis of the given information: (a) In a four-chambered heart, no mixing of oxygenated and deoxygenated blood takes place. Name two groups of animals in the body of which mixed blood flows.

(b) Cnidarians have no body cavity, Annelids and the groups that follow have true coelom. Which other phylum has no coelom? Which one has pseudocoelom?

(c) Phylum protochordata has-a new feature notochord. Up to which phylum this structure is not present?

(d) In organisms the level of organization ranges from cell-->tissue->organ-> organ system.
State the groups which have only cellular and tissue level respectively?
(e) Out of the three germ layers: endoderm. , mesoderm and ectoderm, which develops last. Name two groups of animals that have this germ layer too.
12. Which will have greater inertia of A,B and C filled with same volume of mercury water and air . Give reason to support your answer.
13. A particle weight 120N on the surface of the earth. At what height above the earth's surface will its weight be 30N? Radius of the earth= 6400 Km.
14. Why copper Sulphate solution in water does not show Tyndall effect but mixture of water and milk shows?
OR, You are provided with a mixture of mustard oil and water. Name the technique to separate it and write the principle involved. Draw diagram of the technique used.
15. Raghu had a poor yield due to failure of the crop. His father Rajan suggested that he should grow two or more crops simultaneously in his field as this would reduce risk of loss. He suggested two crops that can be grown together.
(i) Write the name of the cropping pattern which his father suggested.
(ii) Write the names of the examples of crops given by his father.
(iii) Mention any two values that are worth appreciation in his father's behaviour (VBQ)
Question numbers 16 to 21 in Section- A are 5 marks questions
16.(a) What are vectors ?
(b) In many species of mosquitoes the males do not feed on human blood, but females do. State why?
(c) What precautions could you take in your locality or society to reduce the incidences of infectious diseases?
17. (a) Does the sound of an exploded cracker in air travel faster, than the sound produced by humming bee ? State reason.(b) List the three characteristics of a sound wave and state the factors on which these depends. (c) State the SI units of wavelength and frequency.
18. Define kinetic energy. Write an expression for kinetic energy and the SI unit of kinetic energy. Two cars are moving with velocities 36 km/h and 54 km/h on a highway. Find the ratio of their kinetic energies if mass of the cars is 400 kg and 600 kg respectively. Which of the following characters is identifying feature of gymnosperms
19. (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 in terms of mass of the earth and radius of earth.
(c) Why is 'G' called a universal constant?

20 .The velocity-time graph of an object is as shown below.
(a) Identify the kind of motion of the object represented by lines OA and BC.
(b) With what velocity the object is moving at t = 8 seconds
(c) Calculate the acceleration of the object in the following cases :
(i) Between the third and tenth second.
(ii) During the last two seconds.



21. Explain the desirable traits obtained after cross-breeding an indigenous and an exotic breed of poultry birds

Section-B

Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question

22. Write two characters which help in identifying gymnosperms

23.Write the special feature of root and leaves of mustered plants

24. While performing the experiment to establish the relation between loss of weight of solid when immersed in water, to the weight of water displaced, it is seen that loss in weight of solid in salty water is more than tap water. State reason for this observation.

OR, Komal heated some crystals of copper sulphate in a boiling tube and noted the water droplet along the walls of the tube and the colour of crystals changed from blue to white. Give reason?

25. When egg albumin is added to water the clear solution became turbid. How would you test to conform that it is a colloidal solution?

[solution: Filter the contents of test tubes. No residue left on the filter paper but filtrate obtained is translucent. Since, colloid cannot be separated by filtration it is colloid].

26. While determining the melting point of ice teacher instructed that the bulb of the mercury thermometer must remain in the middle of the ice and continuous stirring with glass rod must be done. Why do you think these precautions are necessary?

[Hint: To keep a uniform temperature throughout]

27. In an experiment to determine the toss of weight of an object when immersed in a liquid, State the factors on which the force acting on an object depends ?