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IX-C

AMITY.

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. When do chromatin fibres organize themselves into chromosomes ? 1

2. What is the momentum of a body of mass 5 kg moving with a velocity of 0.20 m/s? 1

3. What is the numerical ratio of average velocity to average speed of an object when it is moving along a straight path without any change in direction? 1

4. What is the effect of change of pressure on physical state of matter ? Explain with an example of a gas. 2

5. Give one word for the following : 2
   (1) Animal tissue connecting muscle to bones.
   (2) Kidney shaped cells that enclose stomata.

6. What happens to the gravitational force between two objects, if the distance between them is doubled ? Explain with the help of formula. 2

7. Classify the following into elements, compounds and mixtures. 3
a) chlorine b)blood c) water d) air e) milk f) oxygen

8. In summers, we prefer to wear cotton clothes. Give reason. 3

9. Why water as steam may cause severe burns but water as ice has cooling effect ? Explain. 3

10. How does the movement of substances take place into and out of the cell? 3

11. Why are 'simple permanent tissues' called so ? Compare the different types of simple permanent tissues ? 3

12. A girl of mass 50 kg jumps out of a moving boat of mass 300 kg on to the bank with a horizontal velocity of 3 m/s. With what velocity will the boat begin to move backwards ? 3

13. A ball is thrown vertically upwards and it returns to the thrower after 6 sec 3

($g=9.8\ m/s^2$) Find.

(i) The velocity with which it was thrown up.
(ii) The maximum height it reaches
(iii) Its position after 4 sec.

14. Answer the following questions : 3

(i) The distance – time graph of motion of a body is parallel to 'X' axis. Identify the nature of motion of the body.
(ii) Name the quantity measured by the slope of the distance – time graph of a moving body.
(iii) Write two advantages of graphical representation of variation of velocity with time over tabular representation of velocity and time.

15. A car acquires a velocity of 72 km per hour in 10 seconds starting from rest. Find : 3
(a) the acceleration
(b) the distance travelled in this time and
(c) the average velocity.

(a) A force of 20 N acts upon a body whose weight is 9.8 N. What is the mass and acceleration produced in the body ? ($g = 9.8\ m/s^{-2}$) 3

(b) Write any one difference between mass and weight of a body.

17 To get a better yield Jaikishan increased the use of pesticides and fertilizers. Though in the initial years he got higher yield and profits but the production decreased after that. He was much worried. His friend Mahesh persuaded him to abandon this practice and start using organic manure. 3

(i) Why are fertilizers used in a field ?

(ii) State the possible reason for the decline in yield ?

(iii) List two values shown by Mahesh.

18 What are macronutrients? Which physiological processes of plants are affected by the deficiency of such nutrients ? 3

19 (a) 'Water is considered as a compound of Hydrogen and Oxygen and not a mixture of Hydrogen and Oxygen.' Comment on this statement. 5

(b) Differentiate between a compound and a mixture (any three points).

20 (a) Explain the effect of temperature on the movement of particles of matter. 5

(b) Give reason why we get smell of hot sizzling food even when we are metres away from it ?

21 Answer the followings : 5

(a) Name the constituents of phloem tissues.

(b) Write the specific function of cardiac muscle.

(c) State two differences between tendon and ligament.

(d) Name the tissue that :

(i) forms of inner lining of our mouth.

(ii) forms the soft parts of leaf, stem, roots and fruit.

(e) Write one function of adipose tissue.

22 (a) State Newton's second Law of Motion. Express it mathematically and find SI unit of force from it. 5

(b) 

In the diagram given above, if the card is flicked away with a jerk, what will you observe ? Explain the reason for this observation.

23 (a) An athlete is moving along a circular path with constant speed. Is the motion uniform or accelerated ? Give reasons. 5

(b) Draw the distance – time graph for the following situations :

(i) When a body is stationary
(ii) When a body is moving with a uniform speed
(iii) When a body is moving with non-uniform speed.

24 State the necessity of the Crop Variety improvement in food production. How can this be executed for the benefit of mankind ? 5

SECTION - B

25 5 g of yellow dal is taken in a test tube and shaken with 5 mL of water. To this a few drops of conc. hydrochloric acid are added. Appearance of pink colour indicates the presence of : 1

(a) starch in the solution (b) metanil yellow as adulterant
(c) safranine stain (d) iodine solution

26 The food groups whose food stuffs will <u>not</u> turn blue black when treated with iodine solution is : 1

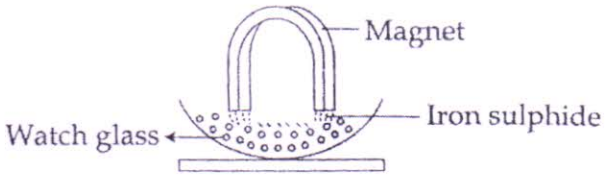
(a) rice, potato, bread

(b) dal, fish, meat

(c) bread, wheat, corn flour

(d) corn starch, boiled potato, boiled rice water

27 What happens when a magnet is brought near iron sulphide taken in a watch glass? 1



(a) Particles of iron move towards the magnet.

(b) Particles of iron sulphide move towards the magnet.

(c) Particles of sulphur move towards the magnet.

(d) No effect on iron sulphide.

28 Which one of the following is not the property of a mixture ? 1

(a) It is a heterogeneous.

(b) It is a system of variable composition.

(c) It is a system of constant composition.

(d) Its components can be separated by physical methods.

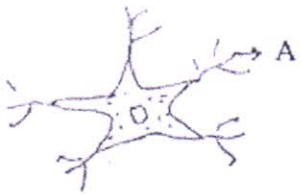
29 Barium sulphate is obtained after adding barium chloride solution to sodium sulphate solution. Barium sulphate is : 1

(a) soluble in water (b) partially soluble in water
(c) insoluble in water (d) gaseous at room temperature

30 Tina was observing a human cheek cell slide stained with methylene blue under a microscope. 1
The colour of the cell appears to be :

(a) red (b) blue (c) black (d) yellow

31 Part of nerve cell has been drawn here. The correct labelling for 'A' is : 1



(a) cilia (b) flagella
(c) tentacles (d) dendrites

32. Out of the following ,the substance which does not undergo sublimation is : 1

(a) sugar (b) camphor

(c) iodine (d) naphthalene

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 How are solution, suspension and colloid different from each other in terms of transparency and scattering of beam of light. Explain in tabular form. 2

35 Write melting point of ice and boiling point of water in degree Celsius and Kelvin scale. 2

36 A teacher soaked 10g raisins in 35mL of distilled water in a beaker A and similar amount in beaker B. She maintained the temperature of beaker A at 20^0C and beaker B at 40^0C. After an hour compared the percentage of water absorbed by the raisins in beakers A and B. What inference is drawn from her results ? 2

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