

**SUBJECT: SCIENCE**

**MAX. MARKS : 40**

**CLASS : IX**

**DURATION : 1½ HRS**

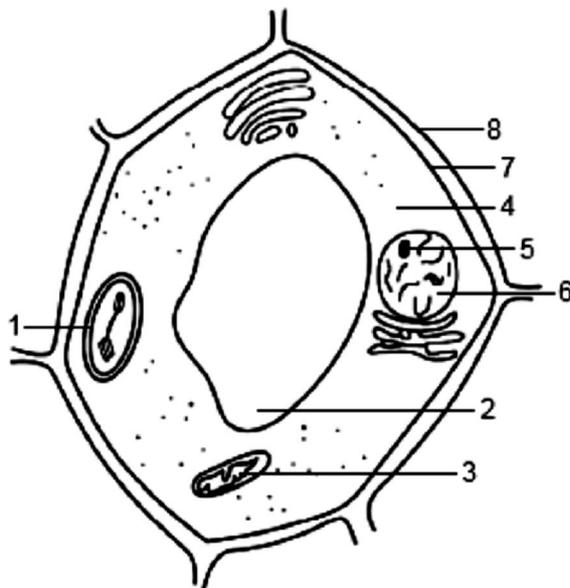
**General Instructions:**

1. All questions are compulsory.
2. The question paper comprises of **two Sections, A and B**. You are to attempt both the sections.
3. All questions of **Section-A** and **Section-B** are to be attempted separately.
4. Question number **1 to 2** in **Section-A** are **one mark** question. These are to be answered in **one word** or in **one sentence**.
5. Question numbers **3** in **Section-A** is **two marks** questions. These are to be answered in about **30 words** each.
6. Question numbers **4 to 8** in **Section-A** are **three marks** questions. These are to be answered in about **50 words** each.
7. Question numbers **9 to 11** in **Section-A** are **five marks** questions. These are to be answered in about **70 words** each.
8. Question numbers **12 to 14** in **Section-B** are questions based on practical skills and are **two marks** questions.

**SECTION – A**

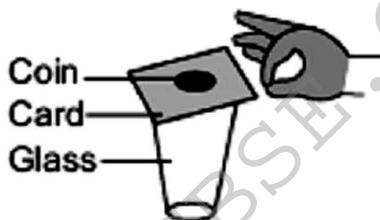
1. If gravitational force acts between all objects, why don't they move towards each other?
2. Name a farming system with minimal or no use of chemical fertilizers.
3. What is mixed cropping? How does it help a farmer?
4. (a) "Evaporation causes cooling". Explain the reason for this effect.  
(b) Explain two examples from our daily life where we feel the effect of cooling due to evaporation.
5. Calculate the amount of water required to prepare 500 g of 2.5% solution of sugar.
6. What is a tissue? What are the functions of connective tissue? Give one difference between ligament and tendon.
7. (a) State the law of conservation of momentum.  
(b) A body of mass 2 kg, initially moving with a velocity of 10 m/s, collides with another body of mass 5 kg at rest. After collision velocity of first body becomes 1 m/s. Find the velocity of second body.
8. (a) Which will exert more pressure: a 100 kg mass on 10 m<sup>2</sup> or 50 kg mass on 4 m<sup>2</sup>? Give reason.  
(b) When we stand on loose sand, our feet go deep into the sand, but when we lie down on the sand our body does not go that deep in the sand. Why?
9. (a) What is meant by the word 'Latent' in latent heat.  
(b) Explain with example of water:
  - (i) latent heat of fusion, and
  - (ii) latent heat of vaporization

10. (a) Draw a velocity-time graph for an object in uniform motion. Show that the slope of velocity time-graph gives acceleration of the body.  
 (b) An aeroplane starts from rest with an acceleration of  $3 \text{ ms}^{-2}$  and takes a run for 35 s before taking off. What is the minimum length of runway and with what velocity the plane took off?
11. Given below is a diagrammatic sketch of a certain generalised cell. (a) Name the parts numbered as 1 to 8. (b) Is it a plant cell or an animal cell? Give two reasons in support of your answer. (c) Give the functions of parts marked as 1, 6 and 8.



**SECTION – B**

12. In the below experimental set-up, a student gives the card a sharp and fast horizontal flick with a finger. (i) What will happen to the coin? (ii) State reason for your answer.



13. On dissolving chalk powder in water, a suspension is obtained. Give any four reasons to support the fact that mixture so obtained is a suspension only.
14. (a) Label sieve tube and sieve plate in the diagram of a phloem tissue. (b) Differentiate between the function of Xylem and Phloem.

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