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Grade : IX	Subject : Science	Marks : 80
PRACTICE PAPER	Empower I	Time Allowed : 3 h

SECTION – A

- Intercellular connections of plant cell are known as
 - Micro fibrils
 - Middle lamella
 - Matrix
 - Plasmodesmata
- What is carcass?
- Permanent tissues are those who lost the property of _____.
- Cells present in cartilage are
 - Condriocyte
 - Osteocyst
 - Condriocyst
 - Osteocyte
- Name the cell which changes its shape.
- The scientific name of Indian rock bee is _____.
- For any change in state of matter, temperature is inversely proportional to _____.
- Conversion of gas state of matter to liquid state of matter is called _____.
- The kinetic energy increases with increase in _____ and decrease in _____.
- Burning of candle is _____ change.
 - Physical
 - Chemical
 - Both a and b
 - None
- Which of the following is a pure substance?
 - Sodium
 - Air
 - Wood
 - Starch Solution
- In aqueous solution, solvent is _____.
 - Milk
 - Alcohol
 - Water
 - Kerosene
- Why is it difficult to hold a bag with a thin strap on the shoulder?
 - Pressure Increases
 - Force Decreases
 - Both (a) and (b)
 - None of these
- An object of mass 5 kg is moving with a velocity of 5 m/s on a horizontal table comes to rest in 10 s. The frictional force is.....
 - 2.5 N
 - 25 N
 - 2.5 N
 - 25 N
- What is the correct unit of friction?
 - N
 - km/h
 - m/s
 - None of these.
- Acceleration due to gravity depends on the mass of the object. (TRUE / FALSE)
- Buoyancy acts downwards. (TRUE / FALSE)

SECTION – B

- What are plastids? Write their functions.
- Which type of solutions will show tyndall effect and why?
- How will you differentiate between sublimation and evaporation.(at least two points each)
- Name different types of connective tissues along with their sub types.
- Differentiate between a) culture fishery and capture fishery. b) mixed cropping and inter cropping.
- Prove that $\frac{W_m}{W_E} = \frac{1}{6}$
- Derive the Law of Conservation of Momentum.

8. Obtain a relation between the distance travelled by an object moving with a uniform acceleration in the interval between 4th and 5th second.
9. Derive the Universal Law of Gravitation.
10. A stone is allowed to fall from the top of a tower 100 m high and at the same time another stone is projected vertically upwards from the ground with a velocity of 25 m/s. Calculate when and where the stones will meet.

SECTION – C

1.
 - a) List four useful traits in improved crop.
 - b) What is myelin sheath? Where do we find it?
 - c) What are micro-nutrients?
2.
 - a) What is histology?
 - b) Differentiate between eukaryotic cell and prokaryotic cell.
3.
 - (a) Explain how evaporation differs from boiling.
 - (b) Why cotton clothes do not dry easily in monsoon.
 - (c) Define: (i) Latent heat of fusion (ii) Melting point
4.
 - (a) Explain the difference between physical and chemical change. (at least 3 points each)
 - (b) Draw a flow chart to show the separation of components of air.
5.
 - (a) Define Momentum.
 - (b) Define Impulse.
 - (c) From a gun of mass 4 kg, a bullet of 50 g is fired with an initial velocity of 35 m/s. Calculate the initial recoil velocity of the gun.
6. Derive the Three equations of motion using Graphical Analysis.