

SCIENCE PRACTICE PAPER HOTS 2025-26: Class- IX

FM-16 (Total 8 Questions and each question carries 2 marks)

1. Calculate the amount of water that should be mixed with 12 mL of alcohol to obtain 12% alcohol solution.
2. A solid melts at 140°C and boils at 250°C .
 - a) Mention the physical state of this substance at 240°C .
 - b) As you cool it down from 240°C , at what temperature will it solidify?
3. Neena took some ammonium chloride in a china dish and put an inverted funnel with a cotton plug on its stem. She then heated it slowly.
 - a) State the observation of Neena.
 - b) Identify the phenomenon taking place and name another substance with which she can make similar observation.
4. An object weighs 100 g in air and 80 g when fully immersed in water.
 - a) Find the buoyant force acting on the object.
 - b) What is the density of the material?
5. A body is dropped from the top of a 100 m high tower. At the same time, another body is projected upward from the ground with a speed of 40 m/s. At what time will the two bodies meet?
6. A bullet of mass 50 grams is fired from a gun of mass 10 kg with a velocity of 400 m/s.
Calculate the recoil velocity of the gun.
7. You have related cell and tissue related few things in your book. In context to that answer the following questions.
 - (a) Identify figures A and B
 - (b) Which one has living cells and which one has dead cells?
 - (c) The pointed arrow (second prominent one) in figure B indicates what?
 - (d) What is common between A and B. (a to d each one carries 0.5 mark)

Fig A

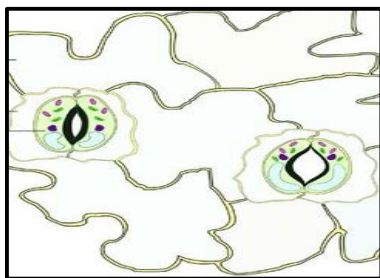
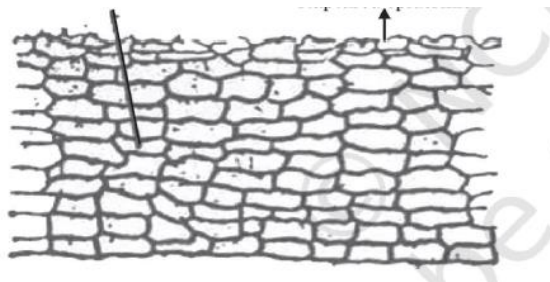


Fig. B



8. Elaborate the immediate consequences with a proper point:
 - a. If apical meristem is cut or damaged?
 - b. If no lysosomes are present in cell.