

SATISH CHANDRA MEMORIAL SCHOOL

HOTS PRACTICE TEST

SUBJECT – SCIENCE

F.M: 8X2=16

• **Answer the following questions :**

1. A student says that a wooden door and a clear glass window are both transparent because both are solid. Is the student correct? Give a reason. (1+1)
2. Why should we not cut trees unnecessarily even though trees are a renewable resource?
3. A freely suspended bar magnet always comes to rest approximately in the north–south direction. What property of magnets does this demonstrate?
4. Two children do not get enough food. One becomes extremely thin and weak with wrinkled and loose skin while the other develops a swollen belly. What could be the reason for the difference?
5. **Plant X** produces seeds with a single cotyledon and features a dense, shallow root system that rapidly absorbs surface rainwater, **Plant Y** develops taproots that penetrate deep into the soil and bears flowers with floral parts in multiples of four or five.

If a leaf from **Plant X** and a leaf from **Plant Y** were torn vertically along their margins, which plant's leaf would tear in a straight, clean line, and which would tear unevenly? Explain using their internal arrangement (venation). (1+1)

6. A pendulum moves from its central position to the right, returns through the centre, moves to the left, and comes back again. A student says, “Because the pendulum follows a curved path, it should be called circular motion.” Do you agree? Give a reason. (1+1)

7. Two farmers can supply the same vegetable to your town. Farmer A lives 15 km away while Farmer B lives 800 km away. The vegetables are otherwise similar.

Why might buying from Farmer A be beneficial not only to you but also to the environment and the local community? (Mention 2 points)

8. Two identical bottles contain different amounts of water. Bottle A is half full and Bottle B is completely full. (1+1)

A. Which bottle contains a greater volume of water?

B. Does the capacity of the bottles differ? Justify.