

## **HOTS (Higher Order Thinking Skills)**

**Q. 1. A person met with an accident in which two long bones of the hand were dislocated.**

**What could be the reason?**

**Ans.** Dislocation of the bones of the hand was caused due to the breakage of the ligament which connects the two bones and keeps them in place.

**Q. 2. If the tip of a sugarcane plant is removed from the field, even then it keeps on growing in length. Why?**

**Ans.** Removing the tip of the sugarcane does not remove the intercalary meristem of the plant. It is this meristem which increases the length of the plant.

**Q. 3. A nail is inserted in the trunk of a tree at a height of 1 metre from the ground level. After 3 years, where will the nail be present?**

**Ans.** The nail will remain at the same position even after 3 years. This is because a plant or tree grows from its tip (stem or root) not from the point at which it joins the ground. So, the tree will grow but the nail will remain at the same place on the tree trunk.

**Q. 4. The root tips of a plant were cut and the plant was replanted. What will happen to the plant and why?**

**Ans.** The plant will die within few days of replanting it. This is because since the root tips are cut, the roots won't grow because of absence of meristematic tissue. And if the roots will not grow, proper absorption of water and minerals will not occur.

**Q. 5. Tissue A and tissue B constitute tissue C. A carries water B carries Food for the plant Identify A, B, C.**

**Ans. A.** Xylem

**B.** Phloem

**C.** Vascular bundles