

## HOTS (Higher Order Thinking Skills)

**Q.1. What is self sterility mechanism in flowers which allows only cross-pollination?**

**Ans.** In self sterility, pollen grains of the same flower are not capable to fertilise that flower, e.g., potato, tobacco, tea, etc. Hence, cross-pollination is the rule applied.

**Q. 2. What are the basic differences between male and female germ cell?**

**Ans.**

Male Germ Cell	Female Germ Cell
1. Produced by male reproductive organ (testes in animals, anther in plants)	1. Produced by female reproductive organ (ovary in animals and plants)
2. Usually smaller in size and motile.	2. Usually larger in size and stores food.

**Q.3. How are general growth and sexual maturation different from each other?**

**Ans.** General growth refers to different types of developmental process in the body like increase in height, weight gain, changes in shape and size of the body but sexual maturation is specific to changes reflected at puberty like cracking of voice, new hair patterns, development of breast in female, etc.

**Q.4. Colonies of yeast fail to multiply in water, but multiply in sugar solution. Give one reason for this.**

**Ans.** Sugar provides energy for sustaining all life activities in yeasts. In water, it fails to reproduce because of inadequate energy in its cells.