4. Describe three devices by which cross pollination is encouraged in Angiosperms by avoiding self pollination.

ANS : Three outbreeding devices to te fowering plants have developed:

- Receptivity of steroe and release of the pollen grain is not synchronized, i.e., stigma become veceptive note before pollens are released or after they are released to avoid self-pollination.
- Self-incompatibility: A genetic method to prevent pollens from fertilizing ovules of the same flower by inhibiting their germination on stigma or pistil.
- **Production of unisexual flowers:** So that the male and female parts will be present on different plants i.e., dioecious or on different flowers in the same plant (monoecious).
- This prevents both autogamy and geitonogamy.  $\bullet$

2. Explain the stages involved in the maturation of microspore into male gametophyte?

## **ANSWER** :-

- ISWER :-• The nucleus of each more pore mother cell undergoes meiosis or reduction division and gives rise to four hap or nuclei. This process is called microsporogenesis.
- The four nucle Rate arranged tetrahedrally and soon get enclosed with cell walls. These are now called microspores or pollen grains.
- These microspores further divide once by mitosis to form two-celled microspore. differentiates into pollen grain.
- Each microspore The pollen grains soon dry up and become powdery while the tapetum gets absorbed.
- The partition walls between the sporangia get destroyed and the microspores are liberated by the dehiscence of the anther.