



BIOLOGY CH:1 SEXUAL REPRODUCTION IN FLOWERING PLANTS -PROBLEMS

Name: _____

Date: _____

Class: XII Sec: A

1. The meiocyte of rice has 24 chromosomes. How many chromosomes are present in its endosperm?
2. A bilobed , ditheous anther has 100 microspore mother cells per microsporangium. How many male gametophytes this anther can produce?
3. How many pollen grains and ovules are likely to be formed in the anther and the ovary of an angiosperm bearing 25 microspore mother cells and 25 megaspore mother cells respectively?
4. The diploid number of an angiosperm plant is 16. What will be the number of chromosomes in its endosperm and antipodal cells ?
5. How many microspore mother cells would be required to produce 100 pollen grains in a pollen sac? And Why?
6. In case of polyembryony, if an embryo develops from the synergid and another from the nucellus, which is haploid and which is diploid ?
7. Answer the following : A flower of tomato plant after the process of sexual reproduction produce 240 viable seeds.
 - i) What is the maximum number of pollengrains that must have been involved in the pollination of its pistil ?
 - ii) What would have been the minimum number of ovules present in the ovary?
 - iii) How many megaspore mother cells were involved?
 - iv) What is the minimum number of microspore mother cell involved in the above case?
 - v) How many male gametes were involved in the case?
8. A flower of a chilly plant after the process of sexual reproduction produces 360 viable seeds
 - i) How many ovules are minimally involved?
 - ii) How many Megaspore Mother Cells are involved?
 - iii) What is the minimum number of pollengrains that must land on the stigma for pollination?
 - iv) How many male gametes are involved in the above case ?
 - v) How many MMCs would have undergone reduction division prior to dehiscence of anther in the above case?