

**PC- 381 CV-19**

**M.Sc. Botany (III SEM.)**

**Examination Dec-2020**

**Compulsory**

**Paper-II**

**PLANT REPRODUCTION**

**Time: Three Hours]**

**[Maximum Marks: 80**

**[Minimum Pass Marks: 29**

**Note: Answer from Both Section as Directed. The figures in the right hand margin indicate marks.**

**Section -A**

**Objective type questions:**

**1X10**

1. Fill in the Blanks
  - a. Author of the book entitled "An Introduction to Embryology of Angiosperms" is \_\_\_\_\_.
  - b. The mature anther wall is composed of the four layers. Viz epidemis, \_\_\_\_\_, and \_\_\_\_\_.
  - c. The \_\_\_\_\_ Phase of angiosperms is inconspicuous and extremely reduced.
  - d. The process of formation of microspores from sporogenous tissue is known as \_\_\_\_\_.
  - e. When body of ovule is upright with micropyle, chalaza and funicle, it is called \_\_\_\_\_.
  - f. Allium type of embryo sac is \_\_\_\_\_.
  - g. Cocus nucifera is a classical example of \_\_\_\_\_ Endosperm.
  - h. Pollination by bats is known as \_\_\_\_\_.
  - i. Polyembryony is widespread in \_\_\_\_\_ but rare in \_\_\_\_\_.
  - j. Another name for PCD is \_\_\_\_\_.
2. Answer the following in very short
  - a. What is tapetum?
  - b. What is Double fertilization & Triple fusion?
  - c. What is Nuclear Endosperm?
  - d. What is Embryo Culture?
  - e. What is Mosaic Endosperm?

**2X5**

**Section -B**

**15X4**

**Answer the following question in detail.**

3. Describe Microsporogenesis in detail with diagrams.

**OR**

**Write Notes as-**

- a. Male Sterility
  - b. Pollen allergy
  - c. Pollen Embryos
4. Describe pollen-pistil interaction in detail.

**OR**

Comment upon-

- a. Structure of Embryosac
  - b. Self incompatibility
  - c. Pollination Mechanism and role of Vectors.
5. Describe the process of Endosperm Development in detail.

OR

Write about the biochemistry and molecular biology of fruit maturation.

6. Write a detail essay on "PCD".

OR

Comment upon-

- a. Metabolic changes associated with senescence.
- b. Influence of hormone and environmental factors on senescence.