

2022
B.A./B.Sc.
Fifth Semester
CORE – 11
BOTANY
Course Code: BOC 5.11
(Reproductive Biology of Angiosperms)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. (a) Explain how developmental factors influence the process of floral induction. 8
- (b) Enumerate the scope and contributions of reproductive biology in biological research. 6
2. Discuss the molecular and genetic aspects of flower development. 14

UNIT-II

3. Describe the structure of an anther wall with the support of a labelled diagram. 14
4. (a) State the functions of the male germ unit (MGU) for the successful fertilization in angiosperm. 6
- (b) Describe a mature pollen wall structure with a diagram. 8

UNIT-III

5. Explain the developmental process of the *Polygonum* type of embryo sac with diagram. 14
6. (a) Describe the matured structure and function of the egg apparatus. 10
- (b) Discuss the development and function of the obturator. 4

UNIT-IV

7. Discuss on the adaptational features of anemophily and entomophily. 7+7=14
8. Write short notes on the following: 7×2=14
- (a) Structure of stigma and style
 - (b) Modification of stigmatic surface

UNIT-V

9. Define polyembryony. Discuss on the causes and applications of polyembryony. 2+6+6=14
10. Write short notes on the following: 7×2=14
- (a) In vivo nutrition of embryo
 - (b) Embryo development in *Paeonia*
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