

**2022**  
**B.A./B.Sc.**  
**Third Semester**  
GENERIC ELECTIVE – 3  
**BOTANY**  
*Course Code: BOG 3.11*  
(Plant Anatomy & Embryology)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

**UNIT-I**

1. (a) What is a meristematic tissue? 2  
(b) Discuss the different types of meristems based on their position in the plant body. 8  
(c) Write notes on permanent tissues. 4
2. (a) Write the general characteristics and functions of parenchyma tissue. 7  
(b) Describe the general anatomical systems of the leaf. 7

**UNIT-II**

3. (a) Describe the structural organization of cambium. 10  
(b) Write notes on seasonal activity of vascular cambium. 4
4. Explain in detail the secondary growth in the dicot stem with a diagram. 14

**UNIT-III**

5. Describe the structural composition and function of stomata. 14
6. (a) What are hydrophytes? 2  
(b) Discuss the anatomical modification for adaptation in hydrophytes. 12

## UNIT-IV

7. Define monosporic embryo sac. Explain the organization of embryo sac in *Polygonum* type. 3+11=14
8. Write short notes on the following: 7×2=14
- (a) Anemophily
  - (b) Entomophily

## UNIT-V

9. Define endosperm. Briefly discuss on the types of endosperms. 3+11=14
10. Write short notes on the following: 7×2=14
- (a) Apomixis
  - (b) Polyembryony
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