

**2022**  
**B.A./B.Sc.**  
**Third Semester**  
CORE – 5  
**BOTANY**  
*Course Code: BOC 3.11*  
(Morphology & Anatomy)

*Total Mark: 70*

*Pass Mark: 28*

*Time: 3 hours*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Explain the polarity and organogenesis during embryonic development. 14
2. Describe the structure of different types of simple tissues. 14

**UNIT-II**

3. Discuss the process of cyto-differentiation of trachery elements. 14
4. Write short notes on the following: 7×2=14
  - (a) Lithocysts
  - (b) Transfer cells

**UNIT-III**

5. Give an account of the various theories on organization of shoot apex. 14
6. Write short notes on the following: 7×2=14
  - (a) Differentiate between dicot and monocot leaf
  - (b) Quiescent centre

**UNIT-IV**

7. Write note on ray and axial parenchyma. 14

8. Write short notes on the following: 7×2=14  
(a) Sap-wood and heart-wood  
(b) Ring porous and diffuse porous wood

### UNIT-V

9. Describe the structure of stomata. Briefly explain the different types of stomata found in dicot plants. 6+8=14
10. Write morphological and anatomical adaptations of holophytes. 14
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