

Mid-West University
Examinations Management Office
End Semester Examinations 2081

Bachelor level/ BSc / 5th Semester

Time: 3 hours

Subject: **Anatomy and Embryology (BOT451)**

Full Marks: 60

Pass Marks: 30

Candidates are required to give their answer in their own words as far as Practicable. The figures in the margin indicate full marks.

Section A

Attempt all the long questions.

[4x8 = 32]

1. What do you mean by ecological adaptation? Explain the structural adaptations in hydrophytes (any one) with well label diagram. (1+4+3)
2. Enlist the anomalies. Describe the anomalous secondary growth in *Aristolochia* stem with well label diagram. (2+3+3)

OR

Discuss the internal structure of dicot stem and compare it with monocot stem with well label diagram. (4+2+2)

3. Give the concise account of megasporogenesis and megagametogenesis with suitable diagram.
4. Give short notes on: (4+4)
 - a) Tetrasporic embryo sac
 - b) Embryogenesis in monocots

Section B

Answer the following questions in brief.

[7x3 = 21]

5. Discuss different types of ovules found in angiosperms.
6. Classify plant tissues showing chart.
7. Briefly discuss about the Tunica - Corpus theory with suitable diagram.
8. What do you mean by tapetum? Discuss its types and significance.
9. Draw V.S. of xerophytic leaf that you have studied and point out its major xerophytic features.
10. How double fertilization and triple fusion occur in angiosperms? Discuss it with suitable diagram.

OR

Emphasize on the preservation technique of pollen grains and its practical applications.

11. Discuss polyembryony in brief.

Section C

Answer *any seven* questions in very short.

[7x1 = 7]

12. Define euryalynous.
13. Point out any two adaptation features of xerophytes.
14. Differentiate between apogamy and apospory.
15. Mention any two important significance of secondary growth in plants.
16. Write any two major sclerenchyma.
17. What is dermatogen? Write its functions.
18. Why is pollen viability test important?
19. Define apomixes.
20. Point out the characteristics of insect pollinated flowers.

The End