

TM153035A

Reg. No:.....

Name:.....

**M. Sc. DEGREE (C.S.S.) EXAMINATION, OCTOBER 2016  
SEMESTER III – BOTANY**

**BO3C09TM - PLANT ANATOMY, MICROTECHNIQUE AND DEVELOPMENTAL  
BIOLOGY**

**Time: Three Hours**

**Maximum Marks: 75**

**PART A**

**I. Answer any five questions. Each question carries 3 marks.**

1. What is compression wood? What is its importance?
2. What is imprinting?
3. What is meant by labyrinth seeds? Give examples.
4. How cotton blue is prepared for staining fungal specimens?
5. Write the anatomic features of leaf abscission.
6. What are the principles of whole mounting in biological specimen preparation.
7. Explain the receptacular theory about epigynous ovary formation.

**(5x3=15)**

**PART B**

**II. Answer any six questions. Each questions carries 5 marks**

8. Distinguish apotracheal and paratracheal type wood parenchyma.
9. List the fate of all the 7 cells of a mature *Polygonum* type embryo sac after fertilization.
10. How glycerine jelly is prepared?
11. Bring out the floral adaptation for wind pollination in animophyllous flowers.
12. With the help of illustrations, explain the origin of leaves in angiosperms.
13. Explain natural and coal tar dyes.
14. Comment on determination and differentiation in the development of plants
15. How anatomic features are useful in systematics?
16. Comment on the fruit wall of fleshy fruits.

**(6x5=30)**

**PART C**

**III. Answer any two questions. Each question carries 15 marks**

17. Write an essay on polyembryony in plants.
18. Write an essay on anomalous secondary thickening in dicot stem.
19. Write an essay on how anatomy can contribute in pharmacognosy.
20. Explain the techniques and materials involved in the sectioning and staining for transmission electron microscope.

**(2x15=30)**