

B. Sc. DEGREE END SEMESTER EXAMINATION MARCH 2017**SEMESTER - 4: BOTANY****COURSE: U4CRBOT4 - ANATOMY AND REPRODUCTIVE BOTANY OF ANGIOSPERMS***(For Supplementary - 2014 admission)*

Time: Three Hours

Max. Marks: 60

PART AAnswer **all** questions. Each question carries 1 mark.

1. What is diacytic type of Stomata?
2. How can we differentiate between exarch and endarch xylem?
3. What are raphides?
4. Name the cells that regulate the function of sieve tube.
5. What is cleavage polyembryony?
6. What is perisperm?
7. What are rami form pits?
8. What is meant by placentation?

 $(1 \times 8 = 8)$ **PART B**Answer **any six** questions. Each question carries 2 marks.

9. What is the unique feature of bicollateral vascular bundle?
10. Differentiate between tracheids and vessels.
11. Write critical notes on summer wood and spring wood.
12. What is rhytidome? How is it formed?
13. An unknown plant stem specimen with primary structure is given to you. On the basis of what all anatomical characters you will classify it as a dicot or a monocot stem?
14. Write on formation of knots in secondary wood?
15. Write a note on the economic importance of plant fibres.
16. Differentiate between Schizogenous and Lysigenous cavity
17. Explain the structure of a carpel.
18. Differentiate between heterocellular and homocellular rays.

 $(2 \times 6 = 12)$ **PART C**Answer **any four** questions. Each question carries 4 marks.

19. Give a detailed account of structure and function of sclerenchyma with suitable illustrations.
20. Differentiate Histogen theory from Tunica Corpus theory regarding shoot apex.

21. What makes pollen –pistil interaction significant? What are the step wise events taking place?
22. Describe with the help of diagrams the anatomy of an isobilateral leaf.
23. With the help of suitable illustrations bring out the different types of ovules seen in Angiosperms.
24. What is Apomixis? Explain the different types.

(4 x 4 = 16)

PART D

Answer **any two** questions. Each question carries 12 marks.

25. With the help of suitable diagrams explain the secondary growth in *Bignonia* stem. Comment on the abnormal secondary growth in the plant.

OR

26. Explain in detail the sub microscopic structure of cell wall as well as the growth of cell wall.
27. Explain the structure and development of microspore.

OR

28. Explain the development of embryo in Angiosperms.

(12 x 2 = 24)
