Reg. No..... Name:..... **U413**

BSc DEGREE END SEMESTER EXAMINATION MARCH 2016

SEMESTER – 4: BOTANY

COURSE: U4CRBOT4 - ANATOMY AND REPRODUCTIVE BOTANY OF ANGIOSPERMS

Time: Three Hours Max. Marks: 60

Part A

Answer **all** questions; each question carries 1 mark.

1. What is Paracytic type of stomata?
2. What is Dendrochronology?
3. What are medullary rays?
4. What are idioblasts?
5. What is an aril?
6. What is pericarp?
7. Differentiate between amphivasal and amphicribral concentric bundles?
8. Distinguish between marginal and free central placentation.

(1 x 8 = 8)

Part B

Answer **any six** questions; each question carries 2 marks.

9. Write any two differences between protoxylem and metaxylem.
10. How are latex cells different from latex vessels?
11. How the development of included phloem takes place in the *Bougainvillea* stem?
12. What are lenticels?
13. Distinguish between Hard wood and Soft wood.
14. 'Excretory materials are of no use to plants themselves, but are of high commercial value to man'. Substantiate this statement taking Tannins and Resins on account.
15. What are tyloses? Give an illustrate account.
16. Explain the mechanism behind the wound healing capacity of plants?
17. What is meant by pollen viability?
18. Differentiate between uniseriate and multiseriate rays.

(2 x 6 = 12)

Part C

Answer **any four** questions; each question carries 4 marks.

19. Differentiate between hydathodes and nectaries.

20. How is Histogen theory different from Korper-Kappe theory regarding root apex. Give diagrammatic representation also.
21. Write a brief note on the process of germination of microspore.
22. Describe with diagram the anatomy of a dorsi ventral leaf.
23. Explain the functions of tapetum.
24. How can we classify meristematic tissue on the basis of their position in the plant body? How do they contribute in the growth of a plant?

(4 x 4 = 16)

Part D

Answer **any two** questions; each question carries 12 marks.

25. With suitable diagrams describe the important events taking place during the secondary growth in *Dracaena* stem.

OR

26. Explain the gross structure of primary and secondary plant cell wall. Also give an illustrative account of plasmodesmata.
27. Explain the structure and development of ovule. Also explain various steps in megasporogenesis starting with Archesporium.

OR

28. Explain the development of embryosacs in angiospermsas well asthe structure of a mature embryo sac.

(12 x 2 = 24)

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