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FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2016

(Regular/Supplementary/Improvement) (CUCBCSS-UG)

CC15UBOT1C01 – ANGIOSPERMIC ANATOMY & MICROTECHNIQUE

(Botany - Complementary Course) (2015 Admission Onwards)

Time: 3 hrs.

Max.Marks: 64

Draw diagrams only when specified

PART A (Answer all Questions)

1.is a balloon like out growth of the xylem parenchyma that bulge through the bordered pits of aged vessels to block water movement. Plant length is increased by..... meristems 2. 3.cuts of phellem and phelloderm.is a natural stain 4. 5. Companion cells are found in..... 6. Histogen theory was proposed by.....is the fixative used for anatomical studies 7. 8. Digestative glands are found in..... 9. A concentric Vascular bundle where xylem surrounds the phloem is called...... 10. Give the expansion of TEM. $(10 \times 1 = 10 \text{ marks})$

PART - B (Answer / Explain any seven questions)

- 11. What are lenticells?
- 12. Describe the structure and function of sclerenchyma
- 13. What is Heart wood
- 14. Explain Acid Stains
- 15. Differentiate ray initials and fusitorm initials.
- 16. What are growth rings
- 17. Describe a bicollateral vascular bundle.
- 18. What are bulliform cells?
- 19. What is the principle behind Electron microscopy
- 20. Explain what is meant by dehydration? Name a dehydrating agent.

 $(7 \times 2 = 14 \text{ marks})$

PART - C (Answer any six of the following)

- 21. Explain the organization of the shoot apex by Tunica corpus theory.
- 22. Describe the extra stelar secondary thickening in dicot stem
- 23. With illustration explain the T.S. of young Dicot stem.
- 24. Give a short account on the mechanical operation of a compound microscope
- 25. What are passage cells? Mention its importance in plants.
- 26. Give an account of killing and fixation? What are the common killing fluids used in Microtechnique.
- 27. Briefly describe regressive and progressive staining.
- 28. Give a brief account of secretory tissues

 $(6 \times 4 = 24 \text{ marks})$

PART - D (Answer any two of the following)

- 29. What is anomalous secondary growth? Discuss the secondary growth in Boerhaavia stem with the help of diagram.
- 30. With the help of suitable diagrams, explain the differences between primary structures of monocot and Dicot root.
- 31. Describe the method of permanent slide preparation by microtomy.

(8x2 = 16 marks)
