



Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, December 2017
(Career Related First Degree Programme Under CBCSS)
(Common for Group 2 (a) : Botany and Biotechnology and Group 2 (b)
Biotechnology)
Core Course – IV BB 1341/BV 1341.1 : ANGIOSPERM ANATOMY AND
REPRODUCTIVE BOTANY

Time : 3 Hours

Max. Marks : 80

I. Answer **all** questions in **one** word to maximum **two** sentences.

- 1) What is the chemical nature of primary cell wall in plants ?
- 2) What function is attributed to plasmodesmata ?
- 3) Define complex tissue.
- 4) Where do you find periderm ?
- 5) Where do you find perforation plate ?
- 6) What is ground tissue ?
- 7) Who is the father of Indian embryology ?
- 8) What is double fertilization ?
- 9) What is dendrochronology ?
- 10) Mention the cytology of a mature dicot pollen grain.

(10×1=10 Marks)

II. Answer **any eight** of the following. **Each** answer **not** to exceed **one** paragraph.

- 11) The central part of the stem is dark in colour. Why ?
- 12) What are laticifers ? Give an example.
- 13) What is tapetum ? Mention different types of it.
- 14) Explain the structure of typical monocot embryo.
- 15) Briefly mention parthenocarpy with an example.



- 16) Where do you find middle layers in anthers ? What is its function ?
- 17) Write an account of compound sieve plate.
- 18) What are bulliform cells ? Mention its functions.
- 19) What are ruminant endosperms ?
- 20) Write a short account of schizogenous cavities.
- 21) Mention how dehiscence takes place in an anther.
- 22) Explain the structure of embryo sac in a typical dicot plant. (8×2=16 Marks)

III. Answer **any six** of the following. Each answer **not** to exceed 120 words.

- 23) Describe the structure of bordered pit with a diagram.
- 24) Distinguish dicots and monocots based on their root anatomy.
- 25) With a diagram explain the structure of stomata and its functions.
- 26) Explain how tyloses are formed in dicot plants and its role in durability of wood.
- 27) Give an account of secretory tissue seen in plants.
- 28) Distinguish ring porous and diffuse porous wood.
- 29) Discuss the development of *Capsella* type of embryo.
- 30) Describe how dehiscence of anther takes place in angiosperms.
- 31) What do you mean by barriers to fertilisation ? Explain the barriers you have studied. (6×4=24 Marks)

IV. Answer **any two** of the following, **not** exceeding 350 words.

- 32) Explain the development and functions of different types of endosperm in Angiosperms.
 - 33) What are different types of pollination ? Explain the post pollination events leading to the formation of seed in a typical dicot plants.
 - 34) Describe the various theories on the organisation of apical meristem in angiosperms with proper diagrams.
 - 35) How secondary thickening take place in dicot stems ? Describe with a diagram the anomalies noticed in the secondary thickening in *Boerhaavia* ? (2×15=30 Marks)
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