



RDN – 38

B.Sc. (Semester – VI) Examination, April/May 2019
BOTANY (Paper – XIII)
Plant Anatomy and Development Biology of Flowering Plants

Duration : 2 Hours

Total Marks : 80

- Instructions :** 1) **All** questions are **compulsory**; however **internal** choice is available.
2) Briefly answer subquestion in Question I and II.
3) Figures to the **right** indicate **maximum** marks to the questions or subquestions.
4) Draw appropriate labeled diagrams **wherever** necessary.

I. Answer **any four** of the following :

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- Give the salient features of Angiosperms.
- Briefly explain the tunica corpus theory.
- Distinguish between isobilateral and dorsiventral leaves.
- What is the Adventive Polyembryony ?
- Enlist and brief on the different types of ovules.
- Briefly describe the venation patterns.

II. Write short notes on **any four** of the following :

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- Significance of Apomixis.
- Early and Late wood.
- Wood parenchyma.
- Synergids in female gametophyte.
- Structure of Anther Wall.
- Cellular endosperm.

III. A) With the help of labeled diagrams, classify meristems on the basis of position and origin.

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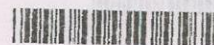
OR

A) Describe any three theories with reference to root apical meristem.

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B) Illustrate and describe the structure of Periderm.

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IV. A) Describe with illustrations "Nodal Anatomy" in Angiosperms.

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OR

A) Explain the concept of a flower as a modified shoot.

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B) With illustrative sketches, write a note on root-stem transition.

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V. A) Define microsporogenesis and explain the stepwise process from pollen germination to double fertilization.

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OR

A) With the help of a neat labeled diagram, explain the bisporic and tetrasporic type of embryo sacs.

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B) Give the floral mechanisms that favour cross pollination.

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VI. A) Explain the genetic basis of Self Incompatibility.

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OR

A) Explain the "*Triticum*" type of embryogenesis.

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B) Write a note on floral nectaries in Angiosperms.

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