



13DD 44 – III (32)

B.Sc. III Semester Degree Examination, Nov./Dec. 2013

Paper – III : BOTANY

Diversity of Vascular Plants, Pteridophytes, Gymnosperms and  
Morphology of Angiosperms

Time : 3 Hours

Max. Marks : 80

**Instructions :** 1) Question No. I of Part – I is compulsory.

2) Answer **any eight** questions from Part – II.

3) Labelled diagrams will enhance your answer **value**.

PART – I

I. Answer the following :

(2×8=16)

- 1) What are coal balls ?
- 2) What is protostele ? Give example.
- 3) Draw a neat diagram of spores with elaters of *Equisetum* and label.
- 4) What is heterospory ? Mention the importance.
- 5) What are fibrous roots ? Give example.
- 6) Differentiate bulb from bulbil.
- 7) What are syngonous stamens ? Give example.
- 8) Differentiate true fruit from false fruit.

PART – II

II. Answer **any eight** of the following :

(8×8=64)

- 9) Write about taproot modifications for storage of food materials.
- 10) Explain aerial modified stems with example.
- 11) What is venation ? Explain the types.
- 12) What are stipules ? Explain the modified stipules.

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- 13) What is Aestivation ? Explain types with examples.
- 14) What is cymose inflorescence ? Explain the types.
- 15) Explain simple fleshy fruits with examples.
- 16) Describe the anatomy and morphology of Rhizophore of selaginella.
- 17) Describe the anatomy of cycas leaflet.
- 18) Explain the anatomy of pinus needle.
- 19) Describe Lycopodium cone L.S.
- 20) Write a short note on **any two** of the following : (4×2=8)
  - a) V.S. of ovule of Gnetum.
  - b) T.S. of calamities stem.
  - c) Petiole T.S. of marselia.
  - d) Stem T.S. of Equisetum.