

(BOT10112)

M.Sc. DEGREE EXAMINATION,
NOVEMBER 2017.

First Semester

Botany

Paper I — BIOLOGY AND DIVERSITY OF VIRUSES,
BACTERIA, ALGAE AND FUNGI

(Regulation 2012)

Time : Three hours

Maximum : 70 marks

Answer ONE questions from each Unit.

All questions carry equal marks.

(5 × 14 = 70)

UNIT I

1. Describe the structure, purification and replication of viruses.

Or

2. Give an account of bacteriophages and plant viruses.

UNIT II

3. Describe the morphology and ultra structure of bacteria.

Or

4. Describe the general characters of Mycoplasma.

UNIT III

5. Describe the thallus organization in algae.

Or

6. Describe the structure and reproduction of Cyanophyta.

UNIT IV

7. Describe the nutrition and reproduction in fungi.

Or

8. Give an account of ecto and endomycorrhizal associations.

UNIT V

9. Explain the role of algae in agriculture.

Or

10. Explain the role of microbes in industry.

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UNIT II

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Paper II — BRYOPHYTES, PTERIDOPHYTES,
GYMNOSPERMS AND PLANT FOSSILS

(Regulation 2012)

Time : Three hours

Maximum : 70 marks

Answer ONE questions from each Unit.

All questions carry equal marks.

(5 × 14 = 70)

UNIT I

1. Describe the thallus organization and reproduction in Hepaticopsida.

Or

2. Describe the evolutionary trends in sporophytes of Bryophytes.

3. Describe the anatomy and reproduction in Lycopsidea.

Or

4. Describe heterospory and seed habit in Pteridophytes.

UNIT III

5. Describe the economic importance of Gymnosperms.

Or

6. Describe the male gametophytes of Gymnosperms.

UNIT IV

7. Describe the process of fossilization.

Or

8. How do you determine the age of plant fossils?

UNIT V

9. Give a comprehensive account of Pteridospermales.

Or

10. Give an account of fossil algae.

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Paper III — TAXONOMY OF ANGIOSPERMS

(Regulation 2012)

Time : Three hours

Maximum : 70 marks

Answer ONE question from each Unit.

All questions carry equal marks.

(5 × 14 = 70)

UNIT I

1. What are the basic components of taxonomy?

Or

2. Explain typification and author citation.

UNIT II

3. Compare and contrast Bentham and Hooker and Takhtajan systems of classifications.

Or

4. Explain the hierarchy in classifications.

UNIT III

5. Explain the role of cytology in resolving taxonomic disputes.

Or

6. Write an essay on different keys studied by you.

UNIT IV

7. Write an essay on plant introductions.

Or

8. Explain the role of floras and monographs in taxonomy.

UNIT V

9. Explain the role of semantides and non-semantides in chemotaxonomy.

Or

10. Write an essay on numerical taxonomy.

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UNIT III

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5. Describe the distribution, description and uses of *Tectona*.

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Or

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6. Describe *Rauwolfia* and add a note on its uses.

Paper IV — PLANT RESOURCE UTILIZATION AND CONSERVATION

UNIT IV

(Regulation 2012)

7. Explain the current practices in conservation in India.

Time : Three hours

Maximum : 70 marks

Answer ONE question from each Unit.

Or

All questions carry equal marks.

(5 × 14 = 70)

8. Give general account on activities of BSI and NBPGR.

UNIT I

UNIT V

1. Explain the present status of biodiversity in India.

9. What are the strategies for *in situ* conservation?

Or

2. Write an essay on Intellectual Property Rights.

Or

UNIT II

3. Explain the botany and cultivation practices of rice.

10. Explain the role of botanical gardens and seed banks in *ex situ* conservation.

Or

4. Give an account of botany and cultivation practices of chillies.