

**(BOT10112)**

M.Sc. DEGREE EXAMINATION,  
OCTOBER/NOVEMBER 2018.

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. (a) Describe the structure, general properties  
and cultivation of viruses.

Or

(b) Give an account of bacteriophages and plant  
viruses.

UNIT II

2. (a) Describe the growth of Bacteria.

Or

(b) Describe the general characters of  
Cyanobacteria.

UNIT III

3. (a) Describe the economic importance of algae.

Or

(b) Give a general account on structure and  
reproduction of xanthophyta.

UNIT IV

4. (a) Describe the nutrition and reproduction in  
fungi.

Or

(b) Give an account of mushroom cultivation.

UNIT V

5. (a) Describe the economic importance of  
bacteria.

Or

(b) Explain the role of fungi in agriculture and  
industry.

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UNIT III

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5. Describe the structure and reproduction in  
coniferopsida.

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Or

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6. Describe the wood in Gymnosperms.

Paper II — BRYOPHYTES, PTERIDOPHYTES,  
GYMNOSPERMS AND PLANT FOSSILS

UNIT IV

(Regulation 2012)

7. Describe the various types of fossils.

Time : Three hours

Maximum : 70 marks

Answer ONE question from each Unit.

Or

All questions carry equal marks.

8. Give an account of geological time scale.

UNIT V

(5 × 14 = 70)

9. Give a comprehensive account of fossil bryophytes.

UNIT I

1. Describe the thallus organization and  
reproduction in Bryopsida.

Or

2. Describe the evolutionary trends in sporophytes of  
Bryophytes.

Or

10. Write an essay on Bennettitales.

UNIT II

3. Describe the stele in Lycopsidea.

Or

4. Describe the origin and phylogeny of Pteridophytes.

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First Semester

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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. Describe the pre-Darwinian systems of classifications.
- Or
2. Describe the various codes of nomenclature studied by you.

UNIT II

3. Give an account of Takhtajan system of classification. Mention the merits and demerits.

Or

4. Write an essay on species concept.

UNIT III

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

Or

6. What is a key? How it is prepared? What are its uses in taxonomy?

UNIT IV

7. Name four important world and herbaria and botanical gardens each.

Or

8. Write an essay on plant explorations.

UNIT V

9. Explain the role of secondary metabolites in chemotaxonomy.

Or

10. Explain the basic concepts of molecular systematics.

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UNIT III

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Paper IV — PLANT RESOURCE UTILIZATION AND  
CONSERVATION

(Regulation 2012)

Time : Three hours

Maximum : 70 marks

Answer ONE question from each Unit.

Answer ALL questions. (5 × 14 = 70)

UNIT I

1. Describe the biodiversity of microbes.

Or

2. Write an essay on Biopiracy and Patent Law.

UNIT II

3. Describe the botany, cultivation and uses of wheat.

Or

4. Describe the botany and cultivation practices  
involved in potato.

5. Describe *Dalbergia* and add a note on its  
distribution and uses.

Or

6. Explain the rôle of bio-fuels in conservation.

UNIT IV

7. Explain the rôle of IUCN and UNESCO in  
conservation.

Or

8. Describe the hot spots of India.

UNIT V

9. Explain the strategies for *in situ* conservation.

Or

10. What rôle did botanical gardens and gene banks  
play in *ex situ* conservation?