

Dr. B.R.AMBEDKAR OPEN UNIVERSITY
FACULTY OF SCIENCE
M.Sc. I Year – BOTANY
(2020-21)

Course – 01: BIOLOGY AND DIVERSITY OF VIRUSES, BACTERIA AND FUNGI

ASSIGNMENT-I

Max.Marks: 15
Min .Marks 06

SECTION – A
(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Describe different techniques employed in viral purification.
2. Discuss the chemical composition of fungal cell wall and its significance in Taxonomy.

SECTION – B
(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Explain briefly the structure of TMV.
2. Write an essay on biofertilisers.

ASSIGNMENT-II

Max.Marks: 15
Min .Marks: 06

SECTION – A
(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Discuss in detail the classification of fungi proposed by Ainsworth and add a note on recent trends in classification.
2. Describe in detail different types of nutrition in fungi.

SECTION – B
(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Write differences between the Gram positive and Gram negative bacteria.
2. Write an account on Nucleoid and Plasmid.

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**COURSE – 02: BIOLOGY AND DIVERSITY OF ALGAE, BRYOPHYTA AND
PTERIDOPHYTA**

ASSIGNMENT-I

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write an essay on “life cycles in Algae”.
2. Theories of progressive sterilization of saprophytes in Bryophyta

SECTION – B

(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Write an account on gametophores in *Marchantias*. Describe their external and internal structures with the help of labeled diagrams.
2. Modifications of Siphonostele.

ASSIGNMENT-II

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write an essay on Telome theory. Discuss briefly about its merits and demerits
2. With the help of labelled diagrams, compare the mature sporophytes of *Pellia* and *Anthoceros*.

SECTION – B

(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Economic importance of Diatoms.
2. Thallus organisation in unicellular forms of Algae.

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Course – 03: GYMNOSPERMS, TAXONOMY OF ANGIOSPERMS AND
ANATOMY
ASSIGNMENT-I

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Differentiate between the terms normal and abnormal secondary growth. With the help of labelled diagrams, describe the abnormal secondary growth in *Aristolochia* stem.
2. Write an essay on conservations of biodiversity.

SECTION – B

(Marks : 5)

II. Answer any one of the following two questions in about 10 lines.

1. Classification of meristems basing on position.
2. Anatomy of stem of *Lyginopteris oldhamia*.

ASSIGNMENT-II

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Enumerate the general characters of Nympheaceae. Add a note on their delimitation and treatments by different taxonomists
2. Write an account of “Hutchinson’s” system of classification. Add a note on its merits and demerits of the system

SECTION – B

(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Classifications of Linnaeus
2. Distribution patterns of Axial wood Parenchyma.

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COURSE – 04: BIOCHEMISTRY AND PLANT PHYSIOLOGY

ASSIGNMENT-I

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write an detailed account on the assimilation of sulphur in plants.
2. Give a detailed account on amino acid biosynthesis in plants.

SECTION – B

(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Kranz anatomy.
2. SPAC concept.

ASSIGNMENT-II

Max.Marks: 15

Min .Marks 06

SECTION – A

(Marks: 10)

I. Answer any one of the following two questions in about 30 lines.

1. Describe the organisation of biological membranes. Add a note on the functions of membranes.
2. Write an account on the degradation of Carbohydrates and Proteins during germination

SECTION – B

(Marks: 5)

II. Answer any one of the following two questions in about 10 lines.

1. Vernalisation.
2. Phytochrome

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M.Sc. – II YEAR – BOTANY (2020 – 21)

COURSE – 05: CELL BIOLOGY, GENETICS, BIostatISTICS & ECOLOGY

ASSIGNMENT – I

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write an essay on structure and function of Ecosystem?
2. Describe briefly how genetic recombination occurs in bacteria?

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Mechanism of cell cycle control?
2. Methods of measuring primary productivity?

ASSIGNMENT – II

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. What are the different types of pollution? Give an account of noise pollution its causes, effects and control measures?
2. What is bioinformatics? Describe its main components and application.

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Value of biodiversity
2. Lamp brush chromosomes.

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M.Sc. – II YEAR – BOTANY (2020 – 21)

COURSE – 06: MEDICINAL PLANTS AND EMBRYOLOGY OF ANGIOSPERMS

ASSIGNMENT – I

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write an essay on adulteration of crude drugs. Add a brief account on drug evaluation.
2. What is megasporogenesis? Write about tetrasporic embryo sac development.

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Ultra structure of embryosac?
2. Melittopalynology

ASSIGNMENT – II

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Describe the morphological characters and the medicinal uses of *Emblica* and *Curcuma*.
2. What is Ethanobotany? Give the history and development of ethanobotanical Studies.

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Phytochemicals.
2. Biological significance of incompatibility.

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M.Sc. – II YEAR – BOTANY (2020 – 21)
COURSE – 07: APPLIED MYCOLOGY AND PLANT PATHOLOGY
ASSIGNMENT – I

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Discuss the importance of mycorrhiza in agriculture and forestry.
2. Give a detailed account of nutritive and medicinal values of mushrooms.

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Fungi as source of food.
2. Describe symptoms of Bakane disease of rice.

ASSIGNMENT – II

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Write in brief regarding the cultivation of button mushrooms.
2. Describe briefly the fermentation process of citric acid production.

SECTION – B
(Marks – 5)

II. Answer any one of the following two questions in about 10 lines.

1. Fungi in bioremediation.
2. Importance of biochemical characteristics in the classification of fungi.

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M.Sc. – II YEAR – BOTANY (2018 – 19)

COURSE – 08: PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

ASSIGNMENT – I

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. What is genome? Give an account of genome organization.
2. Discuss the various modifying enzymes used in molecular cloning?

SECTION – B
(Marks – 5)

II. Answer any one of the following in about 10 lines.

1. Cybrids and their production?
2. Plant metabolomics and its application.

ASSIGNMENT – II

Maximum Marks – 15
Minimum Marks – 06

SECTION – A
(Marks – 10)

I. Answer any one of the following two questions in about 30 lines.

1. Describe the protein synthesis?
2. Describe an account of plant tissue culture technology and its application.

SECTION – B
(Marks – 5)

II. Answer any one of the following in about 10 lines.

1. Applications of molecular markers.
2. Genomic library.

