

M.Sc.(Previous)DEGREE EXAMINATION, DECEMBER – 2015

First Year

MICROBIOLOGY

Paper – I : Introduction Microorganisms

Time : 3 Hours

Maximum Marks: 70

SECTION-A

Answer any Five questions

(5×6=30)

- 1) Contributions of Leeuwenhoek.
- 2) Differences between prokaryote and eukaryote.
- 3) Mycoplasmas
- 4) Bergey's systematic bacteriology
- 5) HIV
- 6) Classification of Virus
- 7) Economic importance of fungi
- 8) Classification of Protozoa

SECTION-B

(4×10=40)

Answer all questions

- 9) Give an account on microbial biodiversity.

OR

Discovery of antibiotics.

- 10) Write an essay on principles of bacterial taxonomy.

OR

Write about Rhizobium and Agrobacterium.

11) Write an essay about morphology and chemistry of viruses.

OR

Give an account on ultra structure and replication of T₄ phage.

12) Explain reproduction in protozoa.

OR

Give a detailed account on classification of fungi.



M.Sc. (Previous) DEGREE EXAMINATION, DECEMBER – 2015

(Examination at the end of First Year)

MICROBIOLOGY

Paper - II : Microbiological Methods

Time : 3 Hours

Maximum Marks: 70

SECTION-A

Answer Any Five of the following

(5×6=30)

- 1) TEM.
- 2) Simple staining.
- 3) Baiting technique.
- 4) Gaspak.
- 5) TLC.
- 6) Plant tissue culture method of virus.
- 7) Mass spectroscopy.
- 8) Auto radiography.

SECTION-B

Answer all of the following

(4×10=40)

- 9) Give a detailed principle and application of phase contrast microscopy?

OR

Explain different staining methods used in bacteriology?

- 10) Describe different methods used for isolation of bacteria?

OR

Describe maintenance and preservation of bacterial culture?

11) Write the differences between differential and density gradient centrifugation?

OR

Describe different methods of isolation and Purification of virus?

12) Write about GM counter and LSC?

OR

Give a detailed account on two dimensional gel electrophoresis?



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First Year

MICROBIOLOGY

Paper - III : Microbial Physiology and Biochemistry

Time : 3 Hours

Maximum Marks: 70

SECTION -A

(5 × 6 = 30)

Answer any five questions

- 1) Nutritional types of bacteria.
- 2) Measurement of cell number and cell mass.
- 3) Anoxygenic bacteria.
- 4) Sulfur Oxidisers.
- 5) Redox potential.
- 6) Ethanol fermentation.
- 7) Pyrimidines.
- 8) Allosteric enzymes.

SECTION -B

(4 × 10 = 40)

Answer All questions

- 9) Describe the process of active transport and passive transport of ions.

OR

Describe different factors influencing bacterial growth.

- 10) Describe light reaction of anoxygenic bacteria.

OR

Write an essay on Methylophils.

11) Describe HMP pathway.

OR

Write an essay on Lactic acid fermentations.

12) Explain the mechanism of enzyme catalysis.

OR

Describe the structure of DNA.



M.Sc. (Previous) DEGREE EXAMINATION, DECEMBER – 2015

(First Year)

MICROBIOLOGY

Paper - IV : Environmental and Agricultural Microbiology

Time : 3 Hours

Maximum Marks: 70

SECTION -A

(5 × 6 = 30)

Answer any five of the following

- 1) Microbial propagules.
- 2) Sewage treatment.
- 3) Soil environment.
- 4) Transformation of Iron.
- 5) PGPR.
- 6) Azospirillum.
- 7) Powdery mildew.
- 8) Plant quarantine.

SECTION -B

(4 × 10 = 40)

Answer All of the following

- 9) a) Describe different types of air sampling technique.

OR

- b) Give an account on different types of water borne pathogens.

- 10) a) Explain the process of carbon transformation in the soil.

OR

- b) Describe different methods of isolation of soil microflora.

11) a) Give a detailed account on mycorrhiza and its importance in agriculture.

OR

b) Give a detailed account on bioinoculants.

12) a) Give an account on different types of chemical control measures for plant diseases control.

OR

b) Give a detailed account on black stem rust of wheat.

