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(DMB 01)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

MICROBIOLOGY

Introduction Microorganisms

Time : 3 Hours

Maximum Marks: 70

SECTION - A

Answer any FIVE questions from the following (5 × 6 = 30)

Q1) Germ theory of diseases.

Q2) Leeuwenhoek.

Q3) Mycoplasmas.

Q4) *Rhizobium*.

Q5) T4

Q6) Viroids.

Q7) Protozoa classification.

Q8) Importance of Microalgae.

SECTION - B

(4 × 10 = 40)

Q9) a) Describe the germ theory of fermentations.

OR

b) Describe the ultra-structure of bacterial cell.

Q10) a) Write an account on Actinomycetes.

OR

b) Describe the morphological, physiological, metabolic, genetic and molecular characters used in the taxonomy of Bacteria.

Q11) a) Describe the morphology and chemistry of Viruses.

OR

b) Describe the ultra structure and replication of TMV.

Q12) a) Write an account on general characters and reproduction of Microalgae.

OR

b) Describe the symptoms and methods of transmission of Viruses.

(DMB 02)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

MICROBIOLOGY

Microbiological Methods

Time : 3 Hours

Maximum Marks: 70

SECTION - A

Answer any FIVE questions from the following (5 × 6 = 30)

Q1) Principle and applications of SEM.

Q2) Composition of media.

Q3) Baiting technique.

Q4) Serial dilution.

Q5) Pock method.

Q6) TLC.

Q7) Isoelectric focussing.

Q8) GM counter.

SECTION - B

(4 × 10 = 40)

Q9) a) Describe the principle, methodology and applications of Fluorescent Microscopy.

OR

b) Describe the methods of staining of Bacteria**Q10)**

a) Write an account on the methods of anerobic culturing

OR

b) Describe the methods of isolation of Bacteria.

Q11)a) Describe the techniques of Centrifugation.

OR

b) Describe the principle, methodology and applications of GLC.

Q12)a) Write an account on radioactive substances used in biology.

OR

b) Describe the principle, methodology and applications of UV-VIS spectrophotometry.



(DMB 03)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

MICROBIOLOGY

Microbial Physiology and Biochemistry

Time : 3 Hours

Maximum Marks: 70

SECTION - A

Answer any FIVE questions from the following (5 × 6 = 30)

- Q1)** Simple diffusion.
- Q2)** Measurement of cell mass.
- Q3)** Purple bacteria.
- Q4)** Iron oxidisers.
- Q5)** Reduction potential.
- Q6)** Krebs cycle.
- Q7)** Properties of isoenzymes.
- Q8)** Structure and functions of RNA.

SECTION - B

(4 × 10 = 40)

Q9) a) Describe the nutritional types of Bacteria.

OR

b) Describe the growth of Bacteria.

Q10) a) Write an account on Oxygenic photosynthesis.

OR

b) Describe the Methylophiles.

Q11) a) Describe the different types of Phosphorylations.

OR

b) Describe the ethanol and lactate fermentations.

Q12) a) Write an account on nature and classification of enzymes.

OR

b) Describe the structure and functions of Nucleic acids..



(DMB 04)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

MICROBIOLOGY

Environmental and Agricultural Microbiology

Time : 3 Hours

Maximum Marks: 70

SECTION - A

Answer any FIVE questions from the following (5 × 6 = 30)

- Q1)** Aeroallergens.
- Q2)** Microbial propagules in air.
- Q3)** Transformation of carbon in soil.
- Q4)** Components of soil.
- Q5)** Rhizobia complex.
- Q6)** Azospirillum.
- Q7)** Symptoms caused by plant pathogenic bacteria.
- Q8)** Blast of Rice.

SECTION - B

(4 × 10 = 40)

- Q9)** a) Describe the techniques of air sampling.
OR
b) Describe the methods of sewage treatment.
- Q10)** a) Write an account on methods of isolation of soil microflora.
OR
b) Describe the diversity and abundance of dominant soil microorganisms.

Q11) a) Describe the structure and functions of legume root nodules.

OR

b) Describe the types of mycorrhizae and the importance of VAM..

Q12) a) Write an account on biological control of plant diseases.

OR

b) Describe the symptomatology, etiology, epidemiology and control of Late blight of Potato.

