

**(DMB 01)**

M.Sc. DEGREE EXAMINATION,  
DECEMBER 2019.  
First Year  
Microbiology

INTRODUCTION MICROORGANISMS

Time : Three hours

Maximum : 70 marks

SECTION A — (5 × 6 = 30 marks)

Answer any FIVE of the following

1. Leeuwenhoek
2. Germ theory of diseases
3. Mycoplasma
4. Archaeobacteria
5. Prions
6. T4
7. Economic importance of Fungi
8. Classification of Protozoa

SECTION B — (4 × 10 = 40 marks)

Answer ALL questions.

9. (a) Write an account on the development of Vaccines.  
Or  
(b) Describe the Ultra-structure and morphology of bacterial cell.
10. (a) Describe the general characters of Cyanobacteria.  
Or  
(b) Write an account on morphology, reproduction and importance of Rhizobium and Staphylococcus.

11. (a) Describe the Ultra-structure and replication of TMV.  
Or  
(b) Describe the symptoms of viral diseases.
12. (a) Write an account on the structure and reproduction of Microalgae.  
Or  
(b) Describe the morphology and reproduction of Protozoa.
-

**(DMB 02)**

M.Sc. DEGREE EXAMINATION,  
DECEMBER 2019.

First Year  
Micro-Biology

**MICROBIOLOGICAL METHODS**

Time : Three hours

Maximum : 70 marks

SECTION A — (5 × 6 = 30 marks)

Answer any FIVE of the following.

1. Simple staining
2. Bacteriological media
3. MPN method
4. Baiting technique
5. Plaque assay
6. Pock method
7. SDS PAGE
8. Autoradiography.

SECTION B — (4 × 10 = 40 marks)

Answer ALL questions.

9. (a) Describe the principle, methodology and applications of bright field microscopy.

Or

- (b) Describe the physical and chemical methods of sterilization.

10. (a) Describe the maintenance and preservation of microbial cultures..

Or

- (b) Write an account on anaerobic cultures.

11. (a) Describe the methods of isolation and purification of Viruses.

Or

- (b) Describe the principle, methodology and applications of GLC.
12. (a) Write an account on Pulse field gel electrophoresis..

Or

- (b) Describe the uses of radioactive substances in Biology.
-

**(DMB 03)**

M.Sc. DEGREE EXAMINATION, DECEMBER 2019.

First Year

Micro-Biology

**MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY**

Time : Three hours

Maximum : 70 marks

SECTION A — (5 × 6 = 30 marks)

Answer any FIVE of the following.

1. Simple diffusion
2. Active transport
3. Anoxygenic photosynthesis
4. Methylophs
5. Free energy
6. Oxidation
7. Allosteric enzymes
8. Isoenzymes.

SECTION B — (4 × 10 = 40 marks)

Answer ALL questions.

9. (a) Describe the nutritional types of bacteria.

Or

- (b) Explain the measurement of bacterial growth.

10. (a) Describe the oxygenic photosynthesis.

Or

- (b) Describe chemoautotrophy.

11. (a) Describe different types of phosphorylations.

Or

(b) Describe the glyoxylate pathway.

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

Or

(b) Describe the structure and functions of nucleic acids.

---

(DMB 04)

M.Sc. DEGREE EXAMINATION,  
DECEMBER 2019.  
First Year  
MICRO BIOLOGY

ENVIRONMENTAL AND AGRICULTURAL MICROBIOLOGY

Time : Three hours

Maximum : 70 marks

SECTION A — (5 × 6 = 30 marks)

Answer any FIVE of the following

1. Aeroallergence
2. Microbial propagules in air
3. Transformation of carbon
4. Components of soil
5. Utilization of Azatobacter
6. Types of Mycorriza
7. Plant quarantine
8. Seed treatment.

SECTION B — (4 × 10 = 40 marks)

Answer ALL questions

9. (a) Describe the air sampling techniques.  
Or  
(b) Describe treatment of water for drinking purpose.
10. (a) Describe the diversity and dominance of soil microorganisms.  
Or  
(b) Describe the methods of isolation of soil microflora.
11. (a) Write an account on biological nitrogen fixation.

Or

- (b) Write an account on phosphate solubilizing microorganisms.
12. (a) Describe the symptoms caused by plant pathogenic Fungi.

Or

- (b) Describe the biological control of plant disease.
-