

**(DMB21)**

**ASSIGNMENT - 1**

M.Sc. DEGREE EXAMINATION MARCH, 2023.

Second Year

Microbiology

**MEDICAL MICROBIOLOGY**

**MAXIMUM : 30 MARKS**

**ANSWER ALL QUESTIONS**

1. Normal flora of skin
2. Bacterial toxins
3. Vibrio cholerae
4. Mycobacterium tuberculosis
5. Polio myelitis
6. Hepatitis

**(DMB21)**

**ASSIGNMENT - 2**

M.Sc. DEGREE EXAMINATION MARCH, 2023.

Second Year

Microbiology

**MEDICAL MICROBIOLOGY**

**MAXIMUM : 30 MARKS**

**ANSWER ALL QUESTIONS**

1. Properties of chemotherapeutic drugs
  2. Nystatin
  
  3. (a) Describe the mechanical and biological barriers to infection.  
(b) Describe the concept of Virulence and invasive factors.
  4. (a) Describe the symptoms, epidemiology, diagnosis and control of the disease salmonella typhi.  
(b) Write an account on opportunistic mycoses.
  5. (a) Describe the AIDS and Oncoviruses.  
(b) Describe the factors responsible for resurgence and emergence of infectious diseases.
  6. (a) Describe the types of epidemics, disease reservoirs and methods of transmission.  
(b) Describe the collection of specimens, transportation and preservation methods.
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**(DMB22)**

**ASSIGNMENT - 1**

M.Sc. DEGREE EXAMINATION, MARCH, 2023.

Second Year

Microbiology

IMMUNOLOGY AND CELLULAR MICROBIOLOGY

**MAXIMUM : 30 MARKS**

**ANSWER ALL QUESTIONS**

1. B cells
2. Macrophages
3. ELISA
4. Agglutination
5. Zipper mechanism
6. Super antigens

**(DMB22)**

**ASSIGNMENT - 2**  
M.Sc. DEGREE EXAMINATION, MARCH, 2023.  
Second Year  
Microbiology  
IMMUNOLOGY AND CELLULAR MICROBIOLOGY  
**MAXIMUM : 30 MARKS**  
**ANSWER ALL QUESTIONS**

1. Signal transduction in chemotaxis
2. Cytokine signalling
3. (a) Describe the types of immune responses.  
(b) Describe the structure and functions of primary lymphoid organs.
4. (a) Describe the nature, types and functions of antigens and antibodies.  
(b) Write an account on autoimmune diseases and their control.
5. (a) Describe the molecular mechanisms of adhesion and bacterial adhesion.  
(b) Describe the types of secretion systems and their significance.
6. (a) Explain the cell signalling system and intracellular second messengers.

Or

- (b) Write an account on Apoptosis.
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**(DMB23)**

**ASSIGNMENT - 1**  
M.Sc. DEGREE EXAMINATION, MARCH, 2023.  
Second Year  
Microbiology  
MICROBIAL GENETICS AND MOLECULAR BIOLOGY  
**MAXIMUM : 30 MARKS**  
**ANSWER ALL QUESTIONS**

1. Gene concept
2. Genome organisation
3. Tripliod code
4. Cracking of genetic code
5. Operon concept
6. Nif genes

**(DMB23)**

**ASSIGNMENT - 2**  
M.Sc. DEGREE EXAMINATION, MARCH, 2023.  
Second Year  
Microbiology  
MICROBIAL GENETICS AND MOLECULAR BIOLOGY  
**MAXIMUM : 30 MARKS**  
**ANSWER ALL QUESTIONS**

1. IS elements
  2. Concept of rDNA technology
  3. (a) Explain DNA as genetic material.  
(b) Describe the genetic recombination in Bacteria.
  4. (a) Describe denaturation and renaturation of DNA.  
(b) Describe the types of Mutations.
  5. (a) Explain the transcription and translation in prokaryotes.  
(b) Describe the nod genes and their regulation in Rhizobium.
  6. (a) Describe the tools and techniques in Molecular biology.  
(b) Describe the transgenic plants and their applications.
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**(DMB24)**

**ASSIGNMENT - 1**

M.Sc. DEGREE EXAMINATION, MARCH, 2023.

Second Year

Microbiology

FOOD AND INDUSTRIAL MICROBIOLOGY

**MAXIMUM : 30 MARKS**

**ANSWER ALL QUESTIONS**

1. Standard plate count
2. Filtration technique
3. Pasteurization of milk
4. Saucerkraut
5. Chelators
6. Buffers

**(DMB24)**

**ASSIGNMENT - 2**  
M.Sc. DEGREE EXAMINATION, MARCH, 2023.  
Second Year  
Microbiology  
FOOD AND INDUSTRIAL MICROBIOLOGY  
**MAXIMUM : 30 MARKS**  
**ANSWER ALL QUESTIONS**

1. Batch culture
  2. Multiple fermentations
  3. (a) Describe the Microorganisms associated with foods and the sources of microbial contamination of foods.  
(b) Describe the causes of food spoilage and microbial spoilage of vegetables.
  4. (a) Describe the various types of single cell proteins.  
(b) Write an account on food poisoning and food borne infections.
  5. (a) Describe the component parts of fermentation processes.  
(b) Describe the processes of screening of microorganisms for the production of commercially important metabolites.
  6. (a) Describe the recovery and purification of fermentation products.  
(b) Describe the economic aspects of fermentation.
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