

AP STATE COUNCIL OF HIGHER EDUCATION
CBCS PATTERN FOR MICROBIOLOGY
B.SC MICROBIOLOGY (CBCS) REVISED SYLLABUS-2020
MBT-III: MEDICAL MICROBIOLOGY AND IMMUNOLOGY

TIME-3HRS

MAX MARKS-75

SECTION – A

I. ANSWER ANY FIVE QUESTIONS
EACH QUESTION CARRIES 5 MARKS

(5 X 5 =25 MARKS)

1. Nosocomial infection.
2. Aspergillosis.
3. Hepatitis-A.
4. Robo virin.
5. Interferon.
6. Lymph nodes.
7. Immunoglobulins.
8. ELISA.

SECTION – B

II. ANSWER ALL QUESTIONS
EACH QUESTION CARRIES 10 MARKS

(5 X 10 = 50 MARKS)

9. A) General principles of diagnostic microbiology-collection, transport and processing of clinical samples.
(OR)
B) General methods of laboratory diagnosis-cultural, biochemical, serological and molecular methods.
10. A) General account on microbial diseases-causal organism, pathogenesis, diagnosis prevention and control.
(OR)
B) Explain the protozoal diseases - Malaria.
11. A) Description and pathology of diseases caused by hemoflagellates.
(OR)
B) Explain the antifungal drugs-Nystatin.
12. A) Explain the organs of immune system .
(OR)
B) Write about the cells of immune system.
- 13) A) Explain the factors affecting antigenicity.
(OR)
B) Explain the types of Antigen-Antibody reactions.

AP STATE COUNCIL OF HIGHER EDUCATION
CBCS PATTERN FOR MICROBIOLOGY
B.SC MICROBIOLOGY (CBCS) REVISED SYLLABUS-2020
MBT-IV: INDUSTRIAL MICROBIOLOGY

TIME-3HRS

MAX MARKS-75

SECTION – A

I. ANSWER ANY FIVE QUESTIONS

(5 X 5 =25 MARKS)

EACH QUESTION CARRIES 5 MARKS

1. Actinomycetes.
2. Fed-batch fermentation.
3. Centrifugation.
4. Therapeutic enzymes.
5. Bioleaching.
6. VitaminB12.
7. Bioreactors.
8. Tube rollers

SECTION – B

II. ANSWER ALL QUESTIONS

(5 X 10 = 50 MARKS)

EACH QUESTION CARRIES 10 MARKS

9. A) Write a note on microorganisms of industrial importance-Yeast (*saccharomyces cerevisiae*), moulds (*Aspergillus niger*).
(OR)
B) Explain the screening techniques.
10. A) Write about the types of fermenters- Batch, continuous and fed batch.
(OR)
B) Explain about downstream processing- filtration, centrifugation, cell disruption, solvent extraction.
11. A) Explain the microorganisms involved in pharma and therapeutic enzymes.
(OR)
B) Explain the role of microorganisms in bioleaching.
12. A) Explain the production media, components and chemical composition of media.
(OR)
B) Explain about Microbial production of industrial products.
- 13) A) Explain the basic structure of bioreactor and types.
(OR)
B) Describe about sterilization of bioreactors-Fibrous-filter sterilization.

AP STATE COUNCIL OF HIGHER EDUCATION
DEPARTMENT OF HUMAN GENETICS
SUBJECT : HGT-III HUMAN MOLECULAR GENETICS B.SC SECOND YEAR SEMESTER III
(UNDER CBCS PATTERN)

TIME-3HRS

MAX MARKS-75

SECTION – A

I. ANSWER ANY FIVE QUESTIONS
EACH QUESTION CARRIES 5 MARKS

(5 X 5 =25 MARKS)

1. Building blocks in DNA.
2. Structure of RNA
3. Post translation processing
4. DNA repair
5. Mutagenesis
6. Difference between Heterochromatin and euchromatin
7. Protein coding genes
8. Transposon repeats

SECTION – B

II. ANSWER ALL QUESTIONS
EACH QUESTION CARRIES 10 MARKS

(5 X 10 = 50 MARKS)

9. A) Explain and Draw a neat labeled structure of DNA.
(OR)
B) Explain the structure of protein with a neat labeled diagram.
10. A) Explain the central dogma of molecular biology.
(OR)
B) Write a note on protein translation.
11. A) Explain the models of DNA replication.
(OR)
B) Describe the process of DNA repair.
12. A) Describe the packaging process of DNA.
(OR)
B) Write a note on chromosomes.
13. A) Explain about Genetic code.
(OR)
B) Explain nuclear genome organization.

AP STATE COUNCIL OF HIGHER EDUCATION
DEPARTMENT OF HUMAN GENETICS
SUBJECT: HGT-IV RECOMBINANT DNA AND STEM CELL TECHNOLOGY **B.SC SECOND YEAR**
SEMESTER IV
(UNDER CBCS PATTERN)

TIME-3HRS

MAX MARKS-75

SECTION – A

I. ANSWER ANY FIVE QUESTIONS
EACH QUESTION CARRIES 5 MARKS

(5 X 5 =25 MARKS)

1. Restriction endonucleases with examples.
2. cDNA libraries.
3. SSCP analysis.
4. Hetero duplex analysis.
5. Minisatellites for DNA fingerprinting.
6. Neonatal screening.
7. Difference between embryonic and germ stem cells.
8. Genetically engineered stem cells for gene therapy.

SECTION – B

II. ANSWER ALL QUESTIONS
EACH QUESTION CARRIES 10 MARKS

(5 X 10 = 50 MARKS)

9. A) Write a note on any four cloning vectors.
(OR)
B) Explain about genomic libraries.
10. A) Explain the methods of DNA sequencing.
(OR)
B) Explain about human disease gene cloning methods.
11. A) Explain the methods of diagnosis of genetic disease in children after birth.
(OR)
B) Explain the gene therapy for heritable and non-heritable diseases.
12. A) Explain about the historical perspectives of stem cells
(OR)
B) Explain about cancer stem cells.
13. A) Explain the need of stem cells in medical field and their mode of preservation.
(OR)
B) Explain about the cardiovascular, metabolic, autoimmune, hematopoietic disorders in stem cell therapy