



Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16(Autonomous)
End Semester Examination: Feb. 2025
Faculty: Science and Technology

Program: BScGen(03)

Semester: VI

SET: A

Program (Specific):

Course Type: DSC

Class: TYBSc

Max.Marks: 35

Name of the Course: Microbial diseases and chemotherapy

Course Code: 24-MB-361

Time: 2Hr

Paper: I

Instructions to the candidate:

- 1) *There are 4 sections in the question paper. Write each section on separate page.*
- 2) *All Sections are compulsory.*
- 3) *Figures to the right indicate full marks.*
- 4) *Draw a well labelled diagram wherever necessary.*

SECTION A

Q1) Answer the following questions.

(5X1=5marks)

- a) Most common organ involved in extraintestinal amoebiasis is_____.
 - i. Brain
 - ii. Lung
 - iii. Spleen
 - iv. Liver
- b) Name the female mosquito species through which Dengue is spread.
- c) State the genetic material of *Influenza* virus.
- d) What is Histoplasmosis?
- e) _____enzyme makes bacteria resistant to penicillin.

Q2) Answer any four of the following questions.

(4X1=4marks)

- a) Name the part of cell on which Rifampicin acts.
- b) Enlist the four species of malarial parasites.
- c) Identify this synergistic drug TMP-SMZ.
- d) State two complications caused due to chronic hepatitis infection.
- e) State any two methods for cultivation of viruses.
- f) Name two viral pathogens with ssRNA

SECTION B

Q3) Answer any four of the following questions.

(4x2= 8 marks)

- a) Explain horizontal gene transfer for development of antibiotic resistance
- b) Diagrammatically illustrate the life cycle of malarial parasite in female *Anopheles* mosquito.
- c) Discuss mechanism of drug resistance on genetic basis.
- d) Describe the Trophozoite of *Entamoeba*.
- e) State the viability characteristics and prophylaxis of corona virus
- f) Classify the following drugs according to their site of action.
Polymyxin, Tazobactam, Griseofulvin, streptomycin

SECTION C

Q4) Answer any four of the following questions.

(4x2= 8 marks)

- a) Define encystation
- b) Relate: FMD virus and Cattles.
- c) Justify: Only female and not male *Anopheles* mosquito can act as vector of malarial parasites.
- d) Explain antigenic drift in influenza virus.
- e) Discuss the epidemiology of *Histoplasma capsulatum*.
- f) Explain inactivation of drug as one mechanism of drug resistance.

SECTION D

Q5) Answer any two the following questions.

(5X2=10marks)

- a) Sketch the life cycle of *Entamoeba*.
- b) Enlist different mechanisms of drug resistance and describe any one in detail.
- c) Discuss the epidemiology of *Corona* virus.
- d) Describe the pathogenesis ,symptoms and lab diagnosis in *Cryptococcus neoformans* infection