



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

Program: BScGen03
Program (Specific): Microbiology
Class: T.Y. B.Sc
Name of the Course: Medical Microbiology
Course Code: 24-MB-351
Paper: I

Semester: V

SET: A
Course Type: DSC
Max.Marks: 35
Time: 2Hr

Instructions to the candidate:

- 1) There are 4 sections in the question paper. Write each section on a 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 all of the following

(5 Marks)

- 1) List the major parts of the central nervous system.
- 2) True or False: Rickettsial infections are typically transmitted via direct contact with infected individuals.
- 3) State the function of the liver in the gastrointestinal system
- 4) Give the name of pathogen responsible for Typhoid.
- 5)organ is primarily involved in detoxification.
 - i) Heart
 - ii) Liver
 - iii) Lungs
 - iv) Stomach
- 6)bacteria is a common cause of urinary tract infections
 - i) *E. coli*
 - ii) *Vibrio cholerae*
 - iii) *Salmonella*
 - iv) *Shigella*

Q2) Answer any four (4/6)

(4 Marks)

- 1) Name two pathogens affecting the respiratory system.
- 2) State the function Lungs
- 3) Explain the principle of cohort studies.
- 4) List the symptoms of Scrub typhus.
- 5) Briefly describe cross-over clinical trials.
- 6) Define Epidemiology.

SECTION: B

Q3) Attempt any 4 Short answer questions (4/6)

(8 Marks)

- 1) Delineate the classification and biochemical characters of *E. coli*.
- 2) State complications of untreated *Neisseria gonorrhea* infection.
- 3) Discuss the epidemiology of cholera.
- 4) List the symptoms *Treponema* infection.
- 5) Record the prophylaxis for *Vibrio* infections.
- 6) Describe the laboratory diagnosis of *Klebsiella*.

SECTION: C

Q4) Answer any 4 questions (4/6)

(8 Marks)

- 1) List the biochemical characters of *Proteus*.
- 2) A 28-year-old woman experiences frequent urination, pain during urination, and lower abdominal pain. The lab test confirms the *Escherichia coli* from her urine sample. State the treatment for the same.
- 3) Relate *Salmonella* with Widal test
- 4) Discuss the pathogenesis of *Streptococcus pneumoniae* infections.
- 5) Relate the mechanism of action of oral rehydration therapy (ORT) in treating cholera patients to the pathophysiology of the disease.
- 6) Enumerate the major antigenic structures of *Klebsiella pneumoniae*.

SECTION: D

Q5) Attempt any two of the following (2/4)

(10 Marks)

- 1) List the organs involved in the urogenital system and recite their physiological roles.
- 2) Explain the pathogenicity of *Clostridium tetani* in causing tetanus.
- 3) Summarize the pathogenesis, symptoms, and treatment of tuberculosis.
- 4) State the classification, biochemical characters, and pathogenesis of *Mycobacterium leprae*.