

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION DECEMBER 2018
(Fifth Semester)**

Branch - **MICROBIOLOGY**

CORE ELECTIVE -1; ANTIMICROBIALS & CHEMOTHERAPY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 2 = 20)

- 1 Waksman.
- 2 Selective Toxicity.
- 3 Ethylene Oxide.
- 4 Disinfectant and Sterilizing agent.
- 5 MLC.
- 6 CLSI.
- 7 Antimetabolites.
- 8 Parenteral routes.
- 9 MDRTB.
- 10 Structural analogues.

SECTION - B (25 Marks!)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Write an account on the general characteristics of antimicrobial drugs.
OR
b What contributions to chemotherapy were made in the development process?
- 12 a Briefly describe the phenol coefficient test.
OR
b Describe the nature, mode of action, advantages and disadvantages of halogens and alcohols.
- 13 a Write an account on structure, mechanism of action route of administration & uses of sulphonamides and tetracyclines.
OR
b Briefly summarize the way in which HIV is currently treated and how the general classes of anti-HIV drugs acts.
- 14 a Write an elaborate account on Mycobacterial drug regime. What is DOTS?
OR
b Write an account on anti protozoan drugs.
- 15 a Write an account on transmission of drug resistance.
OR
b Explain the mechanism of drug resistance.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Briefly explain how effectiveness of antimicrobial agents varies with population size, population composition, concentration of the agent, treatment duration, temperature and local environmental conditions.
- 17 Describe the chemical nature, mechanism of action, mode of application, effectiveness, advantages and disadvantages of use of Phenolics, quaternary ammonium compounds.
- 18 Summarize the mechanism of action and therapeutic use of antifungal drugs: miconazole, nystatin, griseofulvin, amphotericin-B and 5-flucytosine.
- 19 How can dilution susceptibility tests and disk diffusion test to be used to determine microbial drug sensitivity. Briefly describe Kirby Bauer test.