

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022  
(Fifth Semester)

Branch – MICROBIOLOGY

**DISCIPLINE SPECIFIC ELECTIVE – I :- ANTIMICROBIALS & CHEMOTHERAPY**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 The term antibiotic usually refers only to drugs used in ----- infections.  
(i) fungal (ii) viral  
(iii) bacterial (iv) all
- 2 ----- of bacterial pathogen by a drug is referred as bactericidal action of the drug.  
(i) Inhibition (ii) Killing  
(iii) Staticness (iv) Improvement.
- 3 Phenol evaluates ----- activity of a test chemical compound.  
(i) bactericidal (ii) viricidal  
(iii) mucocidal (iv) protocidal
- 4 Oxidation of cellular compounds is the mode of action of -----.  
(i) metals (ii) ethyl alcohol  
(iii) halogens (iv) alcohol
- 5 One of the following is not an aminoglycoside antibiotic.  
(i) Amikacin (ii) Meropenem  
(iii) Gentamycin (iv) Kanamycin.
- 6 Ceftriaxone belongs to  
(i) Penicillin (ii) Cephalosporins  
(iii) Aminoglycosides (iv) Carbapenem
- 7 ----- is used to treat or prevent malaria.  
(i) Erythromycin (ii) Chloroquine  
(iii) Vancomycin (iv) Teicoplanin
- 8 Infective endocarditis is majorly caused due to ----- pathogens.  
(i) bacterial (ii) mold  
(iii) yeast (iv) protozoan
- 9 Multidrug resistant pathogens are generally resistant to ----- antimicrobials each from different groups.  
(i) 5 (ii) 4  
(iii) 3 (iv) 2
- 10 ----- carries the efflux pumps among bacteria.  
(i) flagella (ii) cell wall  
(iii) outer membrane (iv) cytoplasmic membrane

**SECTION - B (35 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 7 = 35)

- 11 a Bring out the milestones in the development of chemotherapy.  
OR  
b How do various factors influence effectiveness of antimicrobials? Explain with examples.
- 12 a State the mode of action of phenolic compounds which are used to control microbes.  
OR  
b Exemplify the uses and mechanism of actions of alcohols against microorganisms.
- 13 a Give the mode of action of beta lactam antibiotics.  
OR  
b Bring out the mechanism of action among amino glycosides.
- 14 a Which is the disc diffusion method determines antimicrobial susceptibilities of pathogens? Explain.  
OR  
b Mention the drugs used to treat UTI. Describe their mode of action.
- 15 a Define an efflux pump. Present their role in the development of antimicrobial resistance.  
OR  
b Discuss the origin of drug resistance among various pathogens.

**SECTION - C (30 Marks)**

Answer any THREE Questions

ALL Questions Carry EQUAL Marks

(3 x 10 = 30)

- 16 Summarize the general characteristics of antimicrobial drugs.
- 17 Explain phenol coefficient test. Add a note on its purpose.
- 18 List out the common antiviral drugs and their mode of action.
- 19 Illustrate the agar dilution method of testing antimicrobial susceptibilities of a bacterial pathogen.
- 20 'The dissemination of antibiotic resistance among pathogens can be controlled by various approaches' - Discuss.

Z-Z-Z

END