Graphic Era
HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act, 1956

Sessional I (Even) Semester Examination March 2025

Roll no.....

Name of the Course: B. Pharm.
Semester: VI
Name of the Paper: Medicinal Chemistry-III
Paper Code: BP601T
Time: 1.5 hour **Maximum Marks: 30**

Note:
(i) This question paper contains three sections
(ii) All the sections are compulsory

Section-A

MULTIPLE CHOICE QUESTION **10 X 1 = 10 MARKS**

S.N	QUESTIONS	Cos
1.	The β-lactam ring is structurally similar to: a) Tetrahydrofuran b) Dihydropyridine c) D-Ala-D-Ala dipeptide d) Pteridine	CO-1
2.	Clavulanic acid is used as a: a) β-Lactamase inhibitor b) Cephalosporin derivative c) Carbapenem antibiotic d) Monobactam	
3.	The major chemical degradation pathway of tetracyclines in acidic conditions is: a) Epimerization b) Hydrolysis c) Oxidation d) Isomerization	
4.	The core nucleus of cephalosporins is: a) Penam b) Cephem c) Oxazolidinone d) Quinolone	
5.	The main structural feature of aminoglycosides is: a) β-Lactam ring b) Sugar moieties linked by glycosidic bonds c) Quinolone core d) Tetracyclic fused ring system	
6.	Macrolide antibiotics are characterized by: a) β-Lactam ring b) Large lactone ring with attached sugar moieties c) Tetracyclic fused ring system d) Quinolone core	CO-2
7.	Chloramphenicol exerts its antibacterial action by inhibiting: a) DNA gyrase b) 30S ribosomal subunit c) 50S ribosomal subunit d) Cell wall synthesis	

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8.	Prodrugs are classified as: a) Lipophilic and Hydrophilic prodrugs b) Carrier-linked and Bioprecursor prodrugs c) Acidic and Basic prodrugs d) Synthetic and Natural prodrugs	
9.	Which of the following drugs is a 4-aminoquinoline derivative? a) Quinine b) Chloroquine c) Mefloquine d) Primaquine	
10.	Which of the following antimalarial drugs is an amino-alcohol? a) Chloroquine b) Quinine c) Mefloquine d) Sulfadoxine	

Section B

Short Questions: Attempt any two **2x5 = 10 marks**

SN	QUESTIONS	CO's
1.	Define and classify antibiotics with examples.	CO1
2.	Write a detail note on structure activity relationship of quinolines.	CO2
3.	Explain the following: a) β-lactamase inhibitors b) Prodrugs and their applications	CO1/CO2

Section C

Long questions: Attempt any one **1x10 = 10 marks**

SN	QUESTIONS	CO's
1.	Discuss historical aspects, structure activity relationship and chemical degradation mechanisms of penicillins.	CO1
2.	Define antimalarials. Give synthesis and uses of Chloroquine and Pamaquine.	CO2