

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025  
(Fourth Semester)

Branch – BIOCHEMISTRY

**MAJOR ELECTIVE COURSE – II: BIOCHEMISTRY OF DRUGS**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	The example of a drug which is obtained from animals is (a) tetracycline (b) fish liver oils (c) streptomycin (d) morphine	K3	CO1
	2	Microsomes are selective to _____ (a) Water-soluble drugs (b) Lipid soluble drugs (c) Acidic drugs (d) Basic drugs	K2	CO1
2	3	International average time for drug to be discovered involves (a) 10 years (b) 2 years (c) 25 years (d) 5 years	K4	CO2
	4	The safety of the candidate drug in humans are studied in (a) Phase I (b) Phase III (c) Phase II (d) Phase IV	K1	CO2
3	5	_____ rule helps ensure that the compound has a balanced ability to form these important interactions without being too polar and too nonpolar. (a) Lipinski Rule of Five (b) Lipinski Rule of Two (c) Lipinski Rule of Three (d) Lipinski Rule of Four	K5	CO3
	6	What is the function of Phosphatidylcholine in multienzyme mixed-function oxidase system, located in the endoplasmic reticulum? (a) Oxidising the substrate (b) Reducing the substrate (c) Facilitate electron transfer from NADPH to cytochrome 450 (d) Facilitate electron transfer from cytochrome 450 to NADPH	K1	CO3
4	7	Combined chemotherapy of tuberculosis is used to (a) Decrease mycobacterium drug-resistance (b) Increase mycobacterium drug-resistance (c) Decrease the antimicrobial activity (d) Decrease the onset of antimycobacterial drugs biotransformation	K4	CO4
	8	The _____ blockers are well absorbed after oral administration. (a) H <sub>2</sub> -receptor (b) H <sub>1</sub> -receptor (c) H <sub>3</sub> -receptor (d) H <sub>4</sub> -receptor	K2	CO4
5	9	Mechanism of Trimethoprim' action is: (a) Inhibition of cyclooxygenase (b) Inhibition of dihydropteroate reductase (c) Inhibition of dihydropteroate synthase (d) Inhibition of DNA gyrase	K1	CO5
	10	Which of the following is used only in life-threatening situations when no other drug is adequate? (a) Penicillin (b) Tetracycline (c) Chloramphenicol (d) Streptomycin	K6	CO5

Cont...

**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Describe the general classifications of drugs.	K2	CO1
		(OR)		
	11.b.	Enumerate the dose response relationship of LD <sub>50</sub> .		
2	12.a.	Point out legal acts of drug design.	K4	CO2
		(OR)		
	12.b.	Enumerate the targets for drug discovery.		
3	13.a.	Discover the microsomal metabolism of drugs.	K1,K6	CO3
		(OR)		
	13.b.	Explain the species differentiation in drug metabolism.		
4	14.a.	Evaluate the role immune response regulators.	K4,K5	CO4
		(OR)		
	14.b.	State the mode of action of sulphonamides.		
5	15.a.	What is drug toxicity of human beings? Discuss.	K3,K2	CO5
		(OR)		
	15.b.	Give an account on tachyphylaxis.		

**SECTION -C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Elucidate the mechanism of routes of drug administration.	K6	CO1
2	17	Describe the action of anti AIDS drug design.	K1	CO2
3	18	Outline the factors affecting drug metabolism.	K3	CO3
4	19	Discuss the mechanism of action of chemotherapy drugs.	K4	CO4
5	20	Elaborate on the chemical and bioassay of drugs.	K2	CO5

Z-Z-Z

END