

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
MSc DEGREE EXAMINATION MAY 2024  
(Second Semester)

Branch -BIOTECHNOLOGY

**MAJOR ELECTIVE COURSE – I: PHARMACEUTICAL BIOTECHNOLOGY**

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	Which process reduces the proportion of active drug available in the circulation? a) Bioavailability                      b) Lock and key mechanism c) Churning                                d) First pass metabolism	K1	CO1
	2	Pharmacodynamics involves the study of the following EXCEPT... a) Biological and therapeutic effects of drugs b) Absorption and distribution of drugs c) Mechanisms of drug action d) Drug interactions	K1	CO1
2	3	What are major role of receptors? a) Determine rate of drug elimination b) determine drug action selectivity c) provide a means of blocking drug action as well as mediating drug action d) act as drug storage sites	K1	CO2
	4	The recent (2023) 'Shigellosis' outbreak in United States of America developed resistance to which of the following commonly used antibiotics for the infection? a) Ciprofloxacin and Azithromycin b) Rifampicin and Flucanazole c) Cephalosporin and Imipenem d) Amphotericin and Vancomycin	K1	CO2
3	5	International average time for drug to be discovered is _____. a) 10 years      b) 2 years      c) 25 years      d) 5 years	K2	CO3
	6	The IV administration of drugs are _____. a) 100% bioavailable b) Rapidly absorbed c) Undergoes the first-pass metabolism d) Rapidly excreted by renal	K2	CO3
4	7	Rate determining step is for _____. a) Absorption controlled release drug delivery system. b) Drug release from dosage form c) Both d) None	K2	CO4
	8	Polymers are used in various drugs delivery system for _____. a) Modify pharmacokinetic profile b) Modify Pharmacodynamics profile c) For Drug targeting d) All the above	K2	CO4

Cont...

5	9	Testing of raw materials and finished products is the responsibility of _____. a) Stores department b) Quality Assurance department c) Production department d) Quality Control department	K1	CO5
	10	The hormone Erythropoietin is involved in the production of _____. a) RBC      b) WBC      c) platelets      d) plasma	K2	CO5

**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.	Compare the Pharmacokinetics and Pharmacodynamics.	K4	CO1
		(OR)		
	11.b.	Explain the methods treatment of poisoning.		
2	12.a.	Enumerate the steps of detoxification mechanism by Liver.	K3	CO2
		(OR)		
	12.b.	Identify the types of drug receptor interactions.		
3	13.a.	Explain the toxicity study of drugs.	K3	CO3
		(OR)		
	13.b.	Interpret the pharmacovigilance.		
4	14.a.	Compare the sustained release and controlled release in drug delivery system.	K4	CO4
		(OR)		
	14.b.	State the modes of drug delivery methods.		
5	15.a.	List of the guidelines of Quality Assurance.	K4	CO5
		(OR)		
	15.b.	State the significance of interferons and interleukins.		

**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	Compare the ATC and NSAID drug classification.	K4	CO1
2	17	Discuss drug response on central nervous system.	K4	CO2
3	18	Explain about drugs discovery cycle.	K4	CO3
4	19	Distinguish between the Enzyme activated and Osmotic activated drug delivery system.	K4	CO4
5	20	Explain the production of mAbs and pAbs and their application.	K4	CO5

Z-Z-Z

END