LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **CHEMISTRY**

FIFTH SEMESTER – **NOVEMBER 2024**

UCH 5602 – MEDICINAL AND PHARMACEUTICAL CHEMISTRY

Date: 21-11-2024 Dept. No. Max. : 100 Marks

Time: 09:00 am-12:00 pm

	SECTION A - K1 (CO1)	
	Answer ALL the Questions	**(10 x 1 = 10)**
1.	**Match the following**	
a)	Septikos - crude drug	
b)	Pharmacognosy - rot	
c)	Anticonvulsant drug - liver cancer	
d)	Camptothecin - drug design	
e)	QSAR - sodium valproate	
2.	**True or False**	
a)	Transfer of blood or blood products from one person to another is known as blood transfusion.	
b)	The study of biological and therapeutic effect of drug is known as pharmacy.	
c)	The stent is not to restore the flow of blood and other fluids.	
d)	Hesperidin is a flavanone glycoside found abundantly in citrus fruits.	
e)	Free Wilson approach of QSAR is based on addictive mathematical model.	
	SECTION A - K2 (CO1)	
	Answer ALL the Questions	**(10 x 1 = 10)**
3.	**Answer the following**	
a)	Mention any one antidote for alkali poisoning.	
b)	Which organ acts as major site for drug biotransformation?	
c)	What are sedatives?	
d)	Mention any one medical use of streptomycin.	
e)	Name the electronic parameters used in QSAR.	
4.	**Define the following**	
a)	Antidote	
b)	Pharmacophore	
c)	Therapeutic index	
d)	Drug latentiation	
e)	Molecular modelling	
	SECTION B - K3 (CO2)	
Answer any TWO of the following		**(2 x 10 = 20)**
5.	(a) What is anaemia? Explain its classification. (b) Mention the clinical significances of fecal occult blood test.	(6+4)
6.	(a) Write short note on storage of drugs. (b) Explain the different assays to determine the potential of the drugs.	(4+6)
7.	(a) Draw the structure of quinine and mention its uses. (b) Differentiate sedatives from hypnotics.	(5+5)
8.	(a) Explain the structure and functions of reserpine.	

	(b) Discuss the importance of computer aided drug design.	(5+5)

SECTION C – K4 (CO3)		
Answer any TWO of the following		**(2 x 10 = 20)**
9.	(a) Explain the various methods employed in the sterilization of surgical instruments. (b) Outline the characteristics of an ideal disinfectant.	(5+5)
10.	(a) Specify the physiological effects of hydroxyl and carboxylic acid functional groups. (b) Distinguish antiseptics and disinfectants.	(5+5)
11.	Discuss in detail the structure and functions of chloramphenicol and tetracycline antibiotics.	
12.	Write in detail Hansh and Free Wilson analyses.	
SECTION D – K5 (CO4)		
Answer any ONE of the following		**(1 x 20 = 20)**
13.	(a) Explain the principle involved in the Benedict's method of analysis of urine samples. (b) Write a note on nomenclature and code number of drugs. (c) What is meant by blood pressure? Write its classification.	(10+5+5)
14.	(a) Draw the structure of penicillin and discuss its functions. (b) Discuss in detail the cardiovascular drugs with suitable examples.	(10+10)
SECTION E – K6 (CO5)		
Answer any ONE of the following		**(1 x 20 = 20)**
15.	(a) Explain briefly the components of blood. (b) Describe the phase-I drug metabolism.	(10+10)
16.	(a) Discuss the structure-activity relationship of modified morphine. (b) Write a short note on the extraction of hesperidin. (c) Explain the mechanism of action and therapeutic uses of camptothecin.	(5+5+10)
