UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION IN B.PHARM (HONS) - 2019
PHAMC 3114 MEDICINAL CHEMISTRY I – PAPER II

Date: 03.05.2021 **Time: 02 Hours**

Answer All Six Questions.

1.	1.1	Name two secondary messengers that are produced in the G_q protein coupled receptor signal transduction pathway.	(20 Marks)
	1.2	Briefly explain the actions of secondary messengers mentioned in 1.1.	(25 Marks)
	1.3	Diagrammatically describe the activation of G proteins.	(55 Marks)
2.	2.1	List the steps involved in the signal transmission at nerve synapses.	(20 Marks)
	2.2	Explain how acetylcholine is prone to hydrolysis?	(30 Marks)
	2.3	Explain the Structure Activity Relationship (SAR) of acetylcholine.	(50 Marks)
3.	3.1	Name two catecholamines and draw their structures.	(20 Marks)
	3.2	Draw the adrenoceptor binding site of catecholamines and indicate the interactions take place.	(20 Marks)
	3.3	Explain how isoprenaline is modified to develop β_2 agonist, Salbutamol?	(60 Marks)
4.	4.1	Name two drugs that are combined in Co-trimoxazole.	(20 Marks)
	4.2	Describe the mechanism of action of Sulphonamides.	(30 Marks)
	4.3	Explain how Sulfathiazole	
		4.3.1 causes toxicity?	(30 Marks)
		4.3.2 can be modified to reduce toxicity?	(20 Marks)
5.	5.1	Name the two types of cardiac glycosides and draw their basic structures.	(40 Marks)
	5.2	Explain the SAR of Angiotensin Converting Enzyme (ACE) inhibitors.	(60 Marks)
6.	6.1	Diagrammatically describe the formation of inter strand cross linking in DNA by Chlormethine.	(30 Marks)
	6.2	Briefly discuss the drawbacks of Marimastat.	(25 Marks)
	6.3	Explain the interactions of Marimastat at the enzyme binding site.	(45 Marks)