



UNIVERSITY OF JAFFNA, SRI LANKA

FIRST YEAR SECOND SEMESTER EXAMINATION IN BPharmHons-2021

PHABP 1222-BIOCHEMISTRY FOR PHARMACY II (14TH BATCH)

PAPER- II

22.06.2023

Duration: 2 hours

Answer All Six Questions.

Answer Each Question on separate answer Books.

Marks Allotted to Each Part are given in Brackets.

1. 1.1 List the pathways which are taking place in red blood cells related to glucose metabolism. (10 Marks)
- 1.2 Among the pathways listed in Section 1.1, name the pathways, which produces,
 - 1.2.1 ATP (05 Marks)
 - 1.2.2 NADPH (05 Marks)
- 1.3 Explain with a diagram how the pathway mentioned in Question 1.2.1 produces ATP. (50 Marks)
- 1.4 Diagrammatically show how the pathway mentioned in Question 1.2.2 produces NADPH. (30 Marks)

2. 2.1 Give two main pathways, which leads to ketone body formation in hepatocytes. (35 Marks)
- 2.2 Give two conditions in which ketone body formation is elevated. (10 Marks)
- 2.3 Explain how the conditions mentioned in Question 2.2 could lead to elevated serum ketone body formation. (30 Marks)
- 2.4 2.4.1 Name two tests that could be carried out to detect ketone bodies in urine. (10 Marks)
- 2.4.2 Give the experimental steps to detect ketone bodies by one of the method named in Question 2.4.1. (15 Marks)

3. 3.1 Give the biochemical basis of the following.
- 3.1.1 Phenylketonuria (35 Marks)
 - 3.1.2 Homocystinuria Type I (35 Marks)
- 3.2 Diagrammatically show how the amino group of alanine is channelled for urea synthesis. (30 Marks)
4. 4.1 Diagrammatically show the structure of tRNA and explain how its structure suits for its function. (25 Marks)
- 4.2 Write short notes on,
- 4.2.1 Lesch Nyhan Syndrome. (25 Marks)
 - 4.2.2 Gout (25 Marks)
 - 4.2.3 Posttranslational modifications of proteins. (25 Marks)
5. 5.1 Show diagrammatically how insulin hormone is secreted by the pancreas when the blood glucose level is elevated. (35 Marks)
- 5.2 Explain how aspirin prevents thrombosis. (40 Marks)
- 5.3 List the factors that determine the quality of proteins. (25 Marks)
6. Complementary feeding is important in the transition from milk feeding to family food.
- 6.1 Give the WHO recommended period of initiation of complementary feeding. (05 Marks)
 - 6.2 Give few examples for the foods which could be used for the initiation of complementary feeding with reasons. (25 Marks)
 - 6.3 List the consequences that may arise due to late weaning. (30 Marks)
 - 6.4 List the adverse effects of feeding unmodified cow milk to infants who are less than three months of age. (40 Marks)