



UNIVERSITY OF JAFFNA, SRI LANKA

FIRST YEAR SECOND SEMESTER EXAMINATION IN BScHons (Nursing) 2021

NURBN 1263-BIOCHEMISTRY FOR NURSES 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 is Given in Brackets.

1. 1.1 Show diagrammatically how insulin hormone is secreted by the pancreas when the blood glucose level is elevated. (40 Marks)
- 1.2 Explain how a person can be prepared to carry out Oral Glucose Tolerance Test (OGTT). (40 Marks)
- 1.3 Give the principle of the specific method used to estimate blood glucose level. (20 Marks)

2. 2.1 Give two main pathways which leads to ketone body formation. (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 Give reasons for the diabetics to have elevated levels of VLDL. (30 Marks)
- 5.2 Explain how cholesterol synthesis is controlled in a nucleated cell. (30 Marks)
- 5.3 5.3.1 List the factors that determine the quality of proteins. (25 marks)
- 5.3.2 Why consumption of high quality of proteins is considered more important than the quantity of proteins? (15marks)
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)