



UNIVERSITY OF JAFFNA, SRI LANKA

FIRST YEAR SECOND SEMESTER EXAMINATION IN BScHons (Nursing) - 2023

NURBN 1263 –BIOCHEMISTRY FOR NURSES-II

(14th and 15th Batches)

PAPER II

Date: 23 JUN 2025

Time: 2 Hours

ANSWER ALL SIX QUESTIONS ON SEPARATE ANSWER BOOK.

1. 1.1 List the three main different types of diabetes mellitus. (15 Marks)
- 1.2 Give reasons for the occurrence of the above types of diabetes mellitus. (30 Marks)
- 1.3 List four possible tests that could be carried out in blood to confirm that an individual is a diabetic. (20 Marks)
- 1.4 Give the expected aimed cut off values of blood glucose level of a diabetic patient that could be obtained in the tests mentioned in Section 1.3. (20 Marks)
- 1.5 Give the principle of the method that is used to measure the glucose level in blood. (15 Marks)
2. 2.1 Explain with a diagram how the fats absorbed into the enterocytes are
 - 2.1.1 incorporated into chylomicron in the enterocytes. (25 Marks)
 - 2.1.2 distributed to different organs in the body by chylomicron. (25 Marks)
- 2.2 What is the normal range of blood LDL to HDL ratio. (10 Marks)
- 2.3 2.3.1 Diagrammatically show the lipid profile of a normal person and that of a hypercholesterolemic patient. (20 Marks)
- 2.3.2 Give reasons for the changes in the lipid profile in a diabetic patient. (20 Marks)
3. 3.1 Give the importance of feeding an infant with colostrum. (25 Marks)
- 3.2 List the advantages of feeding a baby with human milk over the cow milk. (25 Marks)
- 3.3 Explain the advantages of including the fibres in the diet. (25 Marks)
- 3.4 Suggest five fibre rich dietary sources. (25 Marks)

4. 4.1 4.1.1 List the conditions that can lead to increased blood ammonia level.
(10 Marks)
- 4.1.2 Write down the reactions and the respective organ/s in which the detoxification of ammonia is taking place.
(40 Marks)
- 4.2 4.2.1 List two transaminases that are useful to confirm myocardial infarction and liver diseases.
(10 Marks)
- 4.2.2 Diagrammatically show the steps catalysed by the above-mentioned enzymes with their cofactors.
(30 Marks)
- 4.2.3 Give the principles of the estimation of one of the above-mentioned transaminases in the laboratory.
(10 Marks)
5. 5.1 5.1.1 Name the enzyme that is defective in Lesch Nyhan syndrome.
(05 Marks)
- 5.1.2 Diagrammatically show the reactions catalysed by the enzyme mentioned in 5.1.1.
(15 Marks)
- 5.2 5.2.1 List the proteins and enzymes that are involved in replication of the flow of genetic information in a eukaryotic cell.
(30 Marks)
- 5.2.2 Explain the steps involved in the replication with a diagram and describe the functions of the above-mentioned proteins and enzymes in replication.
(50 Marks)
6. 6.1 Explain why the following nutrients requirement of a pregnant woman is more than that of a non-pregnant woman of the same age.
- 6.1.1 Energy
(20 Marks)
- 6.1.2 Protein
(20 Marks)
- 6.2 For a well-nourished lactating mother for the first six months no additional energy is required. Explain.
(20 Marks)
- 6.3 Explain 'supplementary action of proteins' with three examples. (25 Marks)
- 6.4 Explain 'Specific dynamic action'.
(15 Marks)