

UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
FIRST YEAR FIRST SEMESTER EXAMINATION IN BPharmHons-2023

PHABP 1153 BIOCHEMISTRY FOR PHARMACY I (15th & 16th Batches)

PAPER-II

Date: 16.12.2024

Time: 2 Hours

ANSWER ALL THE SIX QUESTIONS IN SEPARATE ANSWER BOOKS.

1. 1.1 Explain how the vitamin B₁₂ deficiency
 - 1.1.1 is caused. (25 Marks)
 - 1.1.2 causes anaemia. (25 Marks)
- 1.2 Glucokinase and hexokinase having different K_m values for glucose is beneficial to the body. Explain. (25 Marks)
- 1.3 Explain why the haemoglobin buffer system is highly efficient in maintaining the blood pH. (25 Marks)

2. 2.1 Diagrammatically show and label the structure of an antibody. (40 Marks)
- 2.2 Diagrammatically show how the serum electrophoretic pattern of the plasma proteins of a nephrotic syndrome patient differs from that of a normal person. (20 Marks)
- 2.3 Explain the homeostasis of serum calcium. (40 Marks)

3. Write short notes on
 - 3.1 posttranslational modification of collagen. (30 Marks)
 - 3.2 principle of electrophoresis. (15 Marks)
 - 3.3 isoelectric pH of amino acids. (15 Marks)
 - 3.4 salting in and salting out. (20 Marks)
 - 3.5 structure of a hair. (20 Marks)

4. 4.1 List the different enzymes and proteins that are involved with DNA replication and their respective functions. (25 Marks)
- 4.2 Write short notes on cholesterol. (20 Marks)
- 4.3 Explain how cells self-regulate energy production. (25 Marks)
- 4.4 Explain the basis of the classification of blood group antigens. (30 Marks)
5. 5.1 'Neonatal physiological jaundice', Explain. (10 Marks)
- 5.2 List the probable causes of neonatal physiological jaundice. (25 Marks)
- 5.3 Explain with reasons the biochemical changes that you expect in the serum, urine and the faeces of the infants affected by neonatal jaundice patients. (30 Marks)
- 5.4 Name the tests that could be carried out with serum and urine to confirm the condition. (12 Marks)
- 5.5 Give the principle of the test that would be carried out in the serum of the patient. (13 Marks)
- 5.6 Name the treatment that is commonly practiced to treat the new born babies with the above condition? (10 Marks)
6. Explain how the
- 6.1 dietary starch is digested in different parts of the gastro intestinal system. (40 Marks)
- 6.2 glucose is absorbed in the enterocytes and enters the skeletal muscle. (30 Marks)
- 6.3 iron is absorbed into the intestinal mucosa. (30 Marks)