

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

PHABP 1153 BIOCHEMISTRY FOR PHARMACY I (14<sup>th</sup> Batch)

PAPER-II

Date: 16.12.2024

Time: 2 Hours

ANSWER ALL THE SIX QUESTIONS IN SEPARATE ANSWER BOOKS.

1. Explain how
  - 1.1 dietary starch is digested in different parts of the gastro intestinal system. (40 Marks)
  - 1.2 glucose is absorbed in the enterocytes and enters the skeletal muscle. (30 Marks)
  - 1.3 iron is absorbed into the intestinal mucosa. (30 Marks)
  
2.
  - 2.1 'Neonatal physiological jaundice', Explain. (10 Marks)
  - 2.2 List the probable causes of neonatal physiological jaundice. (25 Marks)
  - 2.3 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)
  - 2.4 Name the tests that could be carried out with serum and urine to confirm the condition. (12 Marks)
  - 2.5 Give the principle of the test that would be carried out in the serum of the patient. (13 Marks)
  - 2.6 Name the treatment that is commonly practiced to treat the new born babies with the above condition? (10 Marks)

3. 3.1 Diagrammatically show and label the structure of an antibody. (40 Marks)
- 3.2 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)
- 3.3 Explain the homeostasis of serum calcium. (40 Marks)
4. 4.1 Explain how the vitamin B<sub>12</sub> deficiency
- 4.1.1 is caused. (25 Marks)
- 4.1.2 causes anaemia. (25 Marks)
- 4.1.3 causes methylmalnoic aciduria. (25 Marks)
- 4.2 Glucokinase and hexokinase having different K<sub>m</sub> values for glucose is beneficial to the body. Explain. (25 Marks)
5. Write short notes on
- 5.1 posttranslational modification of collagen. (30 Marks)
- 5.2 principle of electrophoresis. (15 Marks)
- 5.3 isoelectric pH of amino acids. (15 Marks)
- 5.4 salting in and salting out. (20 Marks)
- 5.5 structure of a hair. (20 Marks)
6. 6.1 List the different enzymes and proteins that are involved with DNA replication and their respective functions. (25 Marks)
- 6.2 Write short notes on cholesterol. (20 Marks)
- 6.3 Explain how cells self-regulate energy production. (25 Marks)
- 6.4 Explain the basis of the classification of blood group antigens. (30 Marks)