

UNIVERSITY OF JAFFNA, SRI LANKA
First Year First Semester Examination in BPharmHons - 2020

PHABP 1153 – BIOCHEMISTRY FOR PHARMACY I
(14TH BATCH)

PAPER- II

07.02.2022

Time: 2 hours

Answer All Six Questions.

Answer Each Question in Separate Answer Books.

1. 1.1 Explain how the haem biosynthesis is controlled. **(30 Marks)**
- 1.2 Liposomes are clinically used as carriers of drugs. Explain. **(20 Marks)**
- 1.3 Explain the chemiosmotic hypothesis of ATP synthesis. **(30 Marks)**
- 1.4 Explain the biochemical basis of Fluoride preventing dental caries. **(20 Marks)**

2. 2.1 Explain how the structure of fibronectin is suited for its function. **(30 Marks)**
- 2.2 2.2.1 Give the principle of electrophoresis. **(15 Marks)**
- 2.2.2 Diagrammatically show how the electrophoretic pattern of the serum proteins of a nephrotic syndrome patient varies from that of a normal person. **(20 Marks)**
- 2.3 Explain the phenomenon 'Salting out'. **(15 Marks)**
- 2.4 Explain why the people living in the mountainous area of Sri Lanka are more prone to have goitre. **(20 Marks)**

3. 3.1 Administration of the antimalarial drug primaquine, may lead to haemolytic anaemia. Explain. (30 Marks)
- 3.2 Give the tests which could be done in urine and serum to differentiate different types of jaundices. (40 Marks)
- 3.3 Diagrammatically show how thyroid hormone is synthesised in the thyroid follicular cells. (30 Marks)
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4. 4.1 Give the structure and function of hyaluronic acid. (20 Marks)
- 4.2 List the enzymes & proteins and their functions in DNA replication. (20 Marks)
- 4.3 Explain the competitive inhibition of an enzyme with an example. (20 Marks)
- 4.4 Diagrammatically show how dietary fat is digested and absorbed? (20 Marks)
- 4.5 Explain the enterohepatic circulation. (20 Marks)
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5. 5.1 Give the biochemical basis of how thiamine deficiency affects nervous system. (25 Marks)
- 5.2 List the thiamine deficiency diseases and the clinical features. (15 Marks)
- 5.3 Give the structure of cell membrane and the different types of lipids present in it. (20 Marks)
- 5.4 5.4.1 What is multiple myeloma? (05 Marks)
- 5.4.2 Compare the serum protein electrophoretic pattern of a normal person with that of a multiple myeloma patient. (15 Marks)
- 5.4.3 Explain autoimmune disease with an example. (20 Marks)
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6. 6.1 Explain vitamin D metabolism and its role in calcium homeostasis (50 Marks)
- 6.2 Give the biochemical functions of vitamin B₁₂. (30 Marks)
- 6.3 Explain how the functions of folic acid are interconnected with the biochemical functions of Vitamin B₁₂. (20 Marks)