



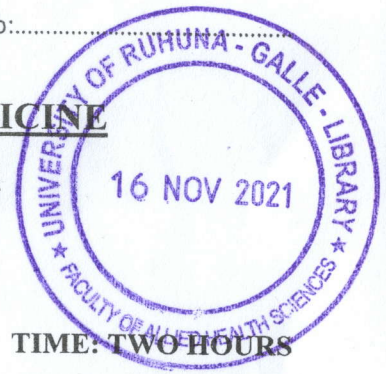
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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

FIRST BPHARM PART I EXAMINATION – JULY 2016

PH 1123: BIOCHEMISTRY I (SEQ)



TIME: TWO HOURS

INSTRUCTIONS

- Answer **all** questions.
- Do not use any correction fluid.
- Answer questions in the given answer books.
- Marks will be deducted for illegible hand writing.

01. Answer **all** parts.

- 1.1. List five different types of proteins in cell with reference to their function. (20 marks)
- 1.2. State the functions of telomeres. (20 marks)
- 1.3. Describe the structure and function of ribosome and Golgi complex. (30 marks)
- 1.4. Explain the characteristic features of prophase and anaphase. (30 marks)

02. Explain the biochemical basis of the following.

- 2.1. Penicillin is used as an antibiotic. (25 marks)
- 2.2. Glucose is a constituent in oral rehydration solution. (25 marks)
- 2.3. Statin is used in the treatment of hypercholesterolaemia. (25 marks)
- 2.4. Alpha-linolenic is an essential fatty acid. (25 marks)

03. Answer **all** parts.

- 3.1. State **two** clinical features of vitamin D deficiency in children. (10 marks)
- 3.2. State the active forms of riboflavin and **three** deficiency features of riboflavin. (20 marks)
- 3.3. Briefly explain the biochemical basis of the following statements.
 - 3.3.1 Chronic renal failure is associated with vitamin D deficiency. (20 marks)
 - 3.3.2 Homocystinuria occurs in vitamin B₁₂ deficiency. (20 marks)
 - 3.3.3 Galctose- 1-phosphate uridylyltransferase deficiency leads to cataract. (30 marks)

04. Answer **all** parts.

- 4.1. Name the main components of respiratory chain. (10 marks)
- 4.2 Briefly explain the biochemical significance of the following.
 - 4.2.1 Proton pumps of the respiratory chain in energy production. (50 marks)
 - 4.2.2 Presence of uncoupling proteins in newborn. (40 marks)