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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

FIRST BPHARM PART II EXAMINATION – NOVEMBER 2015

PH 1232 BIOCHEMISTRY II (SEQ)

TIME: 2 HOURS

INSTRUCTIONS

- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

1.

1.1.

1.1.1 State the structural constituents of an amino acid. **(05 marks)**

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1.1.2 Explain the importance of citric acid cycle in the synthesis of glutamine. **(20 marks)**

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1.1.3 Describe briefly the structural organization of a protein. **(25 marks)**

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1.2

1.2.1 Describe briefly the nitrogen fixation in the synthesis of proteins. **(15 marks)**

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1.2.2 Describe the **main** mechanism of ammonia detoxification in human. **(35 marks)**

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(10 marks)

2.1.4 Explain the importance of amino acids in the synthesis of nucleotides. (35 marks)

(10 marks)

(10 marks)

25

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3.

3.1 List the mechanisms of carbon dioxide transport in humans. (06 marks)

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3.2 Explain the **main** mechanism listed in 3.1. (24 marks)

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3.3 State the factors that affect the affinity of haemoglobin for oxygen. (10 marks)

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3.4 Explain the following

3.4.1 Oxygen dissociation curve for haemoglobin is sigmoid in shape. (30 marks)

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3.4.2 Increased 2, 3-Bisphosphoglycerate concentration in red blood cell causes right shift of oxygen dissociation curve. (30 marks)

4.3 Urine is positive for Bence-Jones protein in a patient with monoclonal gammopathy.

(25 marks)

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4.4 α - feotoprotein is used as a tumour marker in adults.

(25 marks)

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