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**UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES**

**DEPARTMENT OF PHARMACY**

**FIRST BPHARM PART II EXAMINATION – JANUARY 2018**

**PH 1232 BIOCHEMISTRY II (SEQ)**

**TIME: TWO HOURS**

**INSTRUCTIONS**

- There are **four (04)** questions in the parts A and B of the SEQ paper.
- Answer **each** part in separate booklets provided.
- Do not use any correction fluid.
- Answer questions in the given answer books.
- Marks will be deducted for illegible hand writing.

**PART A**

**1. Answer all parts.**

1.1. Genetic code plays an important role in protein biosynthesis.

Explain the following features of the genetic code.

1.1.1. Degeneracy

*(20 marks)*

1.1.2. Unambiguity

*(10 marks)*

1.2. Protein biosynthesis is inhibited by certain antibiotics. Explain the biochemical basis.

*(30 marks)*

1.3. Removal of nitrogen from amino acids is important for further metabolism.

1.3.1 Name **three** processes involved in this process.

*(15 marks)*

1.3.2 Explain the importance of glutamate in the removal of nitrogen from amino acids.

*(25 marks)*

**2. A 53 year-old male patient with liver failure was admitted to a medical ward in a semi-conscious state. His blood ammonia concentration was elevated.**

2.1. State the main sources of ammonia in the body.

*(20 marks)*

2.2. State the mechanisms by which body utilizes ammonia.

*(15 marks)*

2.3. Explain the biochemical basis for the semi-conscious status of the patient.

*(25 marks)*

2.4. Explain the biochemical basis for the use of serum creatinine to assess the renal function.

*(40 marks)*

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**PART B**

3. Explain the biochemical basis of the following.

3.1. Anaphylactic shock is due to type I hypersensitivity reaction.

(50 marks)

3.2. Serum electrophoretogram is important in the diagnosis of multiple myeloma.

(50 marks)

4. Explain the biochemical basis of the following.

4.1. Vaso-occlusive crisis occurs in Sickle cell disease.

(50 marks)

4.2. The oxygen dissociation curve is shifted to right when there is metabolic acidosis. (50 marks)

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