

UNIVERSITY OF JAFFNA, SRI LANKA

UNIT OF ALLIED HEALTH SCIENCES

FIRST YEAR FIRST SEMESTER BASIC SCIENCES EXAMINATION-October 2018

AHSBB 1104 – BASIC BIOCHEMISTRY

PAPER II

Date: 26.10.2018

Time: 2 Hours

ANSWER ALL SIX QUESTIONS

1. 1.1 Explain how glucose metabolism in red blood cells is altered under hypoxic condition that lasts for longer periods. **(30 Marks)**
- 1.2 Show diagrammatically and explain the alteration in the oxygen dissociation curve under the above said condition. **(30 Marks)**
- 1.3 Explain how glycogenesis and glycogenolysis are controlled by different hormones. **(40 Marks)**

2. 2.1 Diagrammatically show the steps involved in the formation of matured chylomicron. **(35 Marks)**
- 2.2 List the factors which affect blood cholesterol level. **(35 Marks)**
- 2.3 Explain how fish protein is digested and absorbed. **(30 Marks)**

3. 3.1 Explain and show the steps how the amino group is obtained for urea formation. **(40 Marks)**
- 3.2 Explain why the 24 hour creatinine excretion is measured. **(20 Marks)**
- 3.3 3.3.1 Explain the biochemical functions of thiamin. **(20 Marks)**
- 3.3.2 Briefly explain why vitamin B12 deficiency causes pernicious anaemia. **(20 Marks)**

4. Write short notes on
- 4.1 Obstructive jaundice. **(30 Marks)**
- 4.2 Maintenance of serum calcium level. **(40 Marks)**
- 4.3 Flow of genetic information. **(30 Marks)**

5. A 40-year-old sedentary man weighting 80kg with 160cm height is seeking for nutritional advice. The dietary analysis shows that he consumes 3000 kcal per day.
- 5.1 What is his ideal weight? **(15 Marks)**
 - 5.2 Comment on his energy balance at 80kg of body weight. **(25 Marks)**
 - 5.3 How many calories does he burn out to become ideal body weight? **(30 Marks)**
 - 5.4 Give your advice with locally available dietary sources to reduce his body weight. **(30 Marks)**
6. 6.1 Allopurinol is used to treat gout. Explain. **(40 Marks)**
- 6.2 Show how polyclonal antibodies are formed against an antigen? **(60 Marks)**