

UNIVERSITY OF JAFFNA, SRI LANKA
UNIT OF ALLIED HEALTH SCIENCES
FIRST YEAR FIRST SEMESTER BASIC SCIENCES EXAMINATION-JULY 2015

AHSBB1104 – BASIC BIOCHEMISTRY
PAPER II



Date: 03.08.2015

Time: 2 Hours

ANSWER ALL SIX QUESTIONS

1. 1.1 Explain the significance of having pentose phosphate pathway in red blood cells. **(40 Marks)**

- 1.2 1.2.1 Explain how glucose metabolism in red blood cells is altered under hypoxic condition that lasts for longer period. **(40 Marks)**

- 1.2.2 Explain the alteration in the oxygen dissociation curve under the above said condition. **(20 Marks)**

2. 2.1 2.1.1 List the functions of apoproteins. **(25 Marks)**

- 2.1.2 Diagrammatically show the steps involved in the metabolism of very low density lipoprotein. **(50 Marks)**

- 2.2 Explain how alcohol consumption can aggravate gout. **(25 Marks)**

3. 3.1 Explain the steps involved in digestion and absorption of meat protein in alimentary canal. **(30 Marks)**

- 3.2 Describe the use of isoenzyme lactate dehydrogenase in clinical biochemistry. **(30 Marks)**

- 3.3** Write short notes on
- 3.3.1** Nonsense mutation. **(20 Marks)**
- 3.3.2** Innate immunity. **(20 Marks)**
- 4. 4.1** Explain how the amino acids are catabolised and mention the fate of end product in the body. **(40 Marks)**
- 4.2 4.2.1** Rickets was observed in a child with chronic steatorrhea. Explain. **(30 Marks)**
- 4.2.2** Diagrammatically show how the iron is absorbed and transported in the body. **(30 Marks)**
- 5. 5.1** Briefly describe the biochemical functions of thiamin. **(30 Marks)**
- 5.2** Thiamin content of parboiled rice is preserved. Explain. **(30 Marks)**
- 5.3** Briefly describe the nutritional value of breast milk. **(40 Marks)**
- 6. 6.1** A 35-year old sedentary man weighing 80 kg with height of 160 cm met you for the nutritional advice.
- 6.1.1** Comment on his body mass index. **(10 Marks)**
- 6.1.2** How would you calculate his total energy requirement per day. **(25 Marks)**
- 6.1.3** How many gram of animal protein diet he would consume to maintain the nitrogen equilibrium. **(20 Marks)**
- 6.2** Give the dietary advice to a pregnant woman. **(45 Marks)**