

**BR 5006****First Year MBBS Examination****I MBBS Biochemistry Paper 2**

Time: 3 hours

Max Marks: 50

Date: 06-12-2014

Instructions: 1. Answer to the points. 2. Figure to the right indicates marks. 3. Use separate answer books for each section. 4. Draw diagrams wherever necessary. 5. Write legibly.

**Section 1**

1. Give an account of: (any two) (10)
  - a. Role of folic acid and vitamin B12 in body
  - b. Polymerase chain reaction technique & its application
  - c. Urea cycle & its disorders
2. Write Short notes on (any three) (9)
  - a. Structure and types of DNA
  - b. Replication fork
  - c. Initiation of protein synthesis
  - d. Genetic code and its characteristics
  - e. Restriction fragment length polymorphism
3. Write Short notes on (any two) (6)
  - a. Proteins nutritional importance & malnutrition
  - b. Various roles of Acetyl CoA
  - c. Blotting techniques

**Section 2**

1. Give an account on (any two) (10)
    - a. Denaturation of protein
    - b. Iron deficiency
    - c. Disposal of ammonia
-

2. A. Write Short notes on (any three) (9)

- a. Methyl folate trap
- b. Pellagra
- c. Gout
- d. Antioxidant vitamins
- e. Biochemical role of cholecalciferol

3. Write Short notes of (any six): A 70 year old man presented with back pain loss of weight and breathless. On examination, he was anemic. Investigations showed. Hb- (6) 8 g/dl: Serum total proteins 20.5 g/dl: S albumin - 3 g/dl: B. Urea 50-mg/dl: S Creatinine - 3 mg/dl. Serum Protein electrophoresis showed a band in gamma region. In urine Bence Jones proteins were present. Radiological examination showed punched out lytic lesions in lumbar vertebrae, ribs and pelvis

- a. What is the likely diagnosis?
- b. Name various other condition which alter A: G ratio.
- c. What is principle of electrophoresis?
- d. How are paraproteins (Myeloma proteins) Different from normal immunoglobulin molecules?
- e. What are Bence Jones proteins? How are they detected in urine?

\*\*\*