

**BIOCHEMISTRY- PAPER II**

**Time: 3 hrs**

**Max marks :50**

- **Answer all questions**
- **Draw diagrams wherever necessary**

**Essay (10)**

1. Describe about sources, RDA, biochemical functions and deficiency manifestations of vitamin A. (1+1+6+2=10)

**Discuss the following: (2x5=10)**

2. Define protein energy malnutrition and compare marasmus and kwashiorkor
3. Describe the salvage pathway of purine nucleotide synthesis with its significance. Describe the disorder associated with it.

**Write short notes on: (5x3=15)**

4. Describe any four functions of calcium
5. Structure of DNA
6. Define metabolic acidosis. Mention the causes and biochemical finding in metabolic acidosis.
7. Define Reverse transcription and mention its significance
8. Name the tests to measure GFR and define creatinine clearance.

**Answer briefly: (5x2=10)**

9. Mention few unusual bases and mention where it is present.
10. Name the buffer systems in the body.
11. Mention the cause and clinical features of pellagra.
12. What is gout and mention few clinical features of gout.
13. Mention two diagnostic uses of radioactive isotopes.

**Give precise answers: (5x1=5)**

14. Name the hormones causing increased cyclic AMP production.
15. Enzyme used as tumor marker.
16. Mention the normal level of serum creatinine.
17. Mention the enzyme deficient in severe combined immunodeficiency disorder.
18. What type of mutation occurs in sickle cell anemia and what is the biochemical defect in sickle cell anemia.