

SS/MBBS/BIO-I/6-19**First Professional MBBS Examination****2019****(June)****BIOCHEMISTRY****Paper-I****Full Marks: 50****Time: 2 hours****The figures in the margin indicate****full marks for the questions****Write the answers to the two Halves in separate books****Answer all questions****FIRST HALF**

1. What are the forces that stabilize primary, secondary and tertiary structures of proteins? Explain the structural organization of hemoglobin molecule, and the effect of alteration in amino acid sequence. [2 + 3 + 3 = 8]

2. Write short notes on any three of the following : 4×3=12

- (a) Cell membrane active transport mechanism
- (b) Transamination reaction and its metabolic importance
- (c) Biological role of vitamin B₁₂
- (d) Carnitine

3. Explain in short : 2½×2=5

- (a) Deficiency of lipotropic factors may result in fatty liver

(b) Newborn infants are at high risk of vitamin K deficiency

SECOND HALF

4. Describe in brief human body distribution and biological functions of calcium. Give a note on calcium homeostasis. 4+4=8

5. Write short notes on any three of the following : 4×3=12

- (a) Free radicals in human diseases
- (b) Plasma bicarbonate buffer
- (c) Competitive enzyme inhibition
- (d) Diet as risk factors of atherosclerosis

6. Explain in short : 2½×2=5

- (a) Presence of bile salts and bile pigments in urine indicates obstructive jaundice
- (b) Severe deficiency of copper leads to hypochromic and microcytic anemia

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