

**Q.P. CODE: 113016**

**Reg. No: .....**

**First Year B.Sc Perfusion Technology Degree Supplementary  
Examinations July 2021**

**Biochemistry**

**(2016 Scheme)**

**Time: 3 Hrs**

**Max. Marks: 80**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays:**

**(2x10=20)**

1. Explain the normal blood pH. Discuss the role of plasma buffers and kidney in maintaining acid – base balance.
2. Outline the pathway of heme synthesis and add a note on porphyrias.

**Short notes:**

**(6x5=30)**

3. Metabolic derangements in diabetes mellitus
4. Fluid – mosaic model of biomembrane
5. Phenyl ketonuria
6. Classification of enzymes
7. Functions and deficiency manifestations of thiamine
8. Significance of HMP shunt pathway

**Answer briefly:**

**(10x3=30)**

9. Competitive inhibition of enzymes
10. HDL cholesterol
11. Absorption of iron
12. Functions of vitamin K
13. Polyunsaturated fatty acids
14. Functions of selenium
15. Secondary structure of protein
16. Essential amino acids
17. Proteinuria
18. Enzymes used to assess liver function

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