

BS/2110

BIOCHEMISTRY PAPER III

10305/NH

Attempt two question from the each Section A and B and the section C is compulsory

Time 3 hrs

MM : 52

**Section A**

- |   |   |  |   |
|---|---|--|---|
| 1 | a | Write a note on Handerson Hasselbalch equation                     | 4 |
|   | b | Write a note on buffers and their biological importance            | 4 |
| 2 | a | Write a note on amino acid sequencing of polypeptides              | 4 |
|   | b | Explain Ramachandran plot  | 4 |
| 3 |   | Briefly explain the  | 4 |
|   |   | 1. Denaturation of proteins;                                       | 8 |
|   |   | 2. Forces stabilizing structure and shape of proteins              |   |
| 4 |   | What is Polysaccharides? Give a brief account on Chitin and starch | 8 |

**Section B**

- |   |  |   |   |
|---|--|---|---|
| 5 |  | Draw the structure of Fluid Mosaic model and discuss its significance | 8 |
| 6 |  | Elaborate the biosynthesis of phosphoglycerides                       | 8 |
| 7 |  | Discuss in detail the tricarboxylic acid cycle.                       | 8 |
| 8 |  | Drive Michaelis-Menten equation. Discuss its significance             | 8 |

**Section C**

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|---|-------|--|----|
| 9 |       | Explain the following (2 x 10)                             | 20 |
|   | i.    | Differentiate between $\alpha$ - helix and $\beta$ - helix |    |
|   | ii.   | Protein folding  |    |
|   | iii.  | amylopectin  |    |
|   | iv.   | Glycosidic bonds   |    |
|   | v.    | Amylopectins   |    |
|   | vi.   | Lipoproteins   |    |
|   | vii.  | Sphingmyelins  |    |
|   | viii. | Phosphoglycerides  |    |
|   | ix.   | Deamination and transamination                             |    |
|   | x.    | Enzyme inhibitors  |    |