

2125  
B.A./B.Sc. (General) Fifth Semester  
Biochemistry  
Paper -B: Applied Biochemistry – I

Time allowed: 3 Hours

Max. Marks: 45

*NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

*x-x-x*

I. Attempt the following:-

- a) Define Respiratory quotient of carbohydrates and lipids.
- b) Write down the biochemical role vitamin C.
- c) Define Specific Dynamic action of foods.
- d) What is the role of various types of conjugation reactions involved in detoxification?
- e) What is the Biochemical role of Vitamin D?
- f) Write the general mechanism of action of Steroidal hormones. (6x1½)

**UNIT - I**

- II. Explain the structure and biochemical function of Riboflavin, biotin and folic acid. (9)
- III. Discuss the role of Vitamin A in visual cycle and role of Vitamin E as antioxidant. (9)

**UNIT - II**

- IV. Describe Starvation and obesity. (9)
- V. Explain the diseases caused by Protein energy malnutrition. (9)

**UNIT - III**

- VI. Explain the nomenclature of cytochrome P450 enzyme system involved in Biotransformation. How is it important in Phase I detoxification? (9)
- VII. What is meant by toxicity of pesticides? Explain the biochemical basis of organophosphate and carbamate toxicity. (9)

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**UNIT - IV**

- VIII. Describe the mechanism of action of insulin and thyroid hormones. (9)
- IX. What are the main features of steroidal hormones? Explain the mechanism of action of steroidal hormones. (9)

*x-x-x*