

1129

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) Nutritional role of Vitamin B12.
- b) Vitamin E as an antioxidant
- c) Essential fatty acids
- d) Biochemical basis of carbamate toxicity
- e) General characteristics of hormones
- f) Thyroid hormones

(6x1½)

UNIT – I

- II. a) Discuss in detail the role of Vitamin K in coagulation.
- b) Describe the sources, structure function and deficiency disease of folic acid. (5+4)
- III. a) Discuss in detail the role of Vitamin A in visual cycle.
- b) Describe the sources, structure function and deficiency disease of thiamine. (5+4)

UNIT – II

- IV. a) Define basal metabolic rate. Describe in detail the factors affecting BMR.
- b) Define respiratory quotient. Calculate RQ of carbohydrates, proteins and fats. (6+3)
- V. a) Write a short note on protein energy malnutrition.
- b) Enumerate essential amino acids. (6+3)

UNIT – III

- VI. a) Write a short note on role of cytochrome P450 in xenobiotic metabolism.
- b) Describe the biochemical basis of organophosphate toxicity. (5+4)

P.T.O.

(2)

- VII. a) Write a short note on effect of nutritional status on xenobiotic toxicity.
b) Describe in detail phase II reactions of drug metabolism (4+5)

UNIT – IV

- VIII. Discuss in detail pituitary hormones. (9)
- IX. a) Write a short note on structure and function of steroid hormones (any two).
b) Comment on the role of PTH and calcitonin in regulation of calcium. (5+4)

x-x-x