Exam.Code:0005
Sub. Code: 0462

2121

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 (Section-A) which is compulsory and selecting one question each from Section B -E.*

x-x-x

Section-A

1. Answer the following-

(i) Is vitamin C a pro-oxidant or antioxidant ? Explain.
(ii) Define respiratory quotient. What is its value for different macronutrients.
(iii) Comment on the biochemical function of folic acid.
(iv) Differentiate between action of insulin and glucagon.
(v) What is specific dynamic action?
(vi) Briefly describe the role of cytochrome P450in xenobiotic metabolism. (6x1.5=9)

Section-B

2. Describe in detail the sources, structure & biochemical function of- (a) Vitamin D (b) Vitamin C. (4.5x2=9)
3. (a) Write a short note on the biochemical function of vitamin A and its deficiency diseases.
(b)Give an account of the structure, sources, biochemical function and deficiency disease of Niacin. (5+4=9)

Section-C

4. Write a short note on the following- (a) Basal metabolic rate (b)Essential nutrients (4.5x2=9)
5. (a) What is obesity? How do you define it? What are its consequences on the health of an individual ?How do you prevent/treat it? (6)
(b) Write a short note on Kwashiorkor. (3)

Section-D

6. (a) Write a short note on the effect of metabolic induction on xenobiotic toxicity. Give examples to explain your answer. (6)
(b) Describe in detail the physico-chemical properties of toxic chemicals. (3)
7. Write a short note on the following- (a) Phase I reactions (b) Biochemical basis of organophosphate toxicity (4.5x2=9)

P.T.O.

Section-E

8. (a) What are mineralocorticoids? Give examples and describe their mode of action.
   (b) Describe in detail the hormones involved in regulation of calcium. (4.5x2=9)
9. Write a short note on the following- (a) Hypothalmic hormones (b) Structure, function& mechanism of action of thyroid hormones (4.5x2=9)

x-x-x