

B.Sc. CBCS Pattern Semester-V
USBCDST-11 - Biochemistry Paper-III (Nutritional Biochemistry)

P. Pages : 2

Time : Three Hours



GUG/W/23/13113

Max. Marks : 50

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- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. Discuss the measurement of energy expenditure by direct and indirect calorimetric method. **10**

OR

- a) Write a note on factor affecting energy input. **2½**
- b) Describe the basal metabolic rate. **2½**
- c) Write a note on Physiological energy value of foods. **2½**
- d) What is Recommended Nutrient Intakes (RNI)? **2½**

2. Discuss in details Dietary requirements and source of carbohydrates. **10**

OR

- a) Discuss in detail dietary requirement of various nutrients. **2½**
- b) Discuss clinical significance of essential fatty acids. **2½**
- c) Write a note on dietary fiber. **2½**
- d) Describe Saturated Fatty Acids. **2½**

3. i) Discuss in details functions of proteins in the body. **5**

ii) Essential and Non essential amino acids. **5**

OR

- a) Give the significance of iron in metabolism. **2½**
- b) Discuss the role of Calcium. **2½**
- c) Discuss amino acid pool and its significance in human body. **2½**
- d) What is importance Phosphorus and in metabolism? **2½**

4. Discuss in detail Role of Vitamin A as an antioxidant, in Visual cycle. 10

OR

- a) Write a note on fat soluble vitamin. 2½
- b) Give clinical significance of folate. 2½
- c) Write a note on clinical importance of niacin. 2½
- d) Explain the role of Vitamin B6 in metabolism. 2½

5. Solve **any ten** from following.

- a) Give the unit of energy. 1
- b) Define balance diet. 1
- c) What is resting metabolism? 1
- d) Give full form of RDA. 1
- e) Give one example of lipoprotein. 1
- f) Name one disorder which is due to deficiency of any essential fatty acid. 1
- g) What is Nitrogen balance? 1
- h) Give cause of Kwashiorkor. 1
- i) Name the disorder occurs due to Iodine deficiency. 1
- j) Give chemical Name of vitamin K. 1
- k) Give the precursor of Niacin. 1
- l) Name factor essential for Vit B12 absorption. 1
