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AS–1363

B.Sc. (Part—I) Semester—I Examination

FOOD SCIENCE

(Basic Chemistry of Foods)

Time : Three Hours] [Maximum Marks : 80

Note :— (1) **ALL** questions are compulsory.

(2) Chemical formula, equation and diagram if necessary should be used to illustrate your answers.

(3) Question Nos. **2** to **7** carry equal marks.

1. (A) Fill in the blanks :— 2

(i) Vitamin _____ and Vit. C are water soluble vitamins.

(ii) 1000 µg = _____ mg.

(iii) Fatty acid having single bond is known as _____ fatty acid.

(iv) Thiamin is also known as vitamin _____.

(B) Choose the correct alternatives :— 2

(i) The BMR stands for :

(a) Body Mass Ratio (b) Body Metabolic Rate

(c) Basal Metabolic Rate (d) All of the above

(ii) The citrus fruits are rich in vitamin :

(a) A (b) B

(c) E (d) C

(iii) Dietary fibres are following nutrient :

(a) carbohydrate (b) fat

(c) vitamin (d) protein

(iv) Beriberi disease occurs by the deficiency of :

(a) Riboflavin (b) Thiamin

(c) Niacin (d) Pyridoxin

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(C) Answer the following in **ONE** sentence :— 4

(i) Define fiber.

(ii) What is PUFA ?

(iii) Define Denaturation.

(iv) Define equivalent weight.

2. (A) Find normality of solution prepared by dissolving 10 grams of NaOH in 500 ml of water (Eq. of wt NaOH = 40). 4

(B) Explain surface tension. 4

(C) Explain Emulsion and foam. 4

OR

(P) Describe Sol and Gel. 4

(Q) Explain Boiling point and Melting point. 4

(R) Give the classification of Unit Operation. 4

3. (A) Give difference between Marasmus and Kwashiorkor. 4

(B) Define Balanced diet. 4

(C) What are basic food groups ? Give sources. 4

OR

(P) Describe Bomb Calorimeter. 4

(Q) What is BMR ? Which factors affect BMR ? 4

(R) Describe nutrients with their function. 4

4. Define, classification of carbohydrates and sources of it. 12

OR

Define polysaccharide and state its sources and classification. 12

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5. Answer the following questions :—

(A) Classify proteins with its examples. 4

(B) Describe factors affecting denaturation of protein. 4

(C) Classify amino acids with its examples. 4

OR

(P) State the function of proteins. 4

(Q) Properties of protein with its two examples. 4

(R) Describe essential and non essential amino acids. 4

6. (A) Explain the classification of lipids. 4

(B) Describe fatty acids. 4

(C) State properties of fats and oils. 4

OR

(P) Importance of saturated and unsaturated fatty acids. 4

(Q) Give the importance of essential fatty acids. 4

(R) Give the food sources of fat, oil and lipids. 4

7. Describe vitamins, classify them and give their food sources of fat soluble and its deficiency symptoms. 12

OR

Classify minerals; give their food sources of micro minerals and their deficiency symptoms. 12

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