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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) Draw diagrams and give chemical equations wherever necessary.

1. (A) Fill in the blanks :
(i) _____ are as structural monomers for proteins.
(ii) Beri-Beri disease is due to deficiency of _____.
(iii) _____ is a body building Nutrient.
(iv) Scurvy disease is due to deficiency of _____. 2

(B) Choose the correct answer :
(i) Unit of temperature is :
(a) Centrigrade (°C) (b) Fahrenheit (°F)
(c) Kelvin (°K) (d) All of the above
(ii) Sucrose is the name of :
(a) Maltose (b) Common sugar
(c) Common starch (d) Fructose
(iii) How many calories do we get give from 1 gm fat ?
(a) 6 calories (b) 8 calories
(c) 4 calories (d) 9 calories
(iv) Which disease occurs due to deficiency of Vitamin 'A' ?
(a) Rickets (b) Nightblindness
(c) Beriberi (d) Anemia 2

(C) Answer in one sentence :
(i) What is Atomic weight ?
(ii) Define MUFA.
(iii) Define Nutrition.
(iv) Define Essential fatty acid. 4

2. (A) 20 gm of NaOH is dissolved in water to make 250ml solution. What will be the normality (given Equivalent wt : w) ? 4

(B) Define Surface Tension and Viscosity with their units. 4

(C) Give the classification of unit operations. 4

OR

(P) Calculate the equivalent weight of Na_2CO_3 (Given At. wt of Na → 23, C → 12, O → 16 and valency = 2. 4

(Q) Define pH and buffer, give pH scale. 4

(R) Define Equivalent weight with formula. 4

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3. (A) Write food groups with nutritive value. 4

(B) Give importance of Balanced diet. 4

(C) Give Deficiency systems of Kwashiorkar and Marasmus. 4

OR

(P) Discuss about factors affecting BMR. 4

(Q) Discuss about Bomb calorimeter. 4

(R) Give importance of Nutrients. 4

4. (A) Classify carbohydrates with examples. 4

(B) Difference between amylose and amylopectic. 4

(C) Give importance of fiber in diet with food source. 4

OR

(P) Discuss properties of sugar. 4

(Q) Define pectic substance. 4

(R) What are Polysaccharides and their food sources ? 4

5. Classify protein and amino acids food sources. Give names of essential and non essential amino acids. 12

OR

Discuss about Physical and Chemical properties of proteins. 12

6. Discuss about properties of Lipids and Food Sources of Lipids. 12

OR

Classify Lipids, food sources of fatty acids and importance of fatty acids. 12

7. (A) Classify vitamins and minerals 4

(B) Discuss about B_1 and B_2 with characteristics, food sources. 4

(C) Define function of Vitamin A and food sources. 4

OR

(P) Give deficiency symptoms and prevention of Vitamin 'D' and 'C'. 4

(Q) Discuss general characteristics of Vitamins and Minerals. 4

(R) Define deficiency systems of Iron and Calcium. 4

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