(d) Give the functions of fatty acid. 4

(e) What are lipids ? Give it's classification . 4

(f) What are saturated and unsaturated fatty acids ?4

6. (a) Give an account function, sources of Vitamin D. 4

(b) Describe the Vitamin A with Hypervitaminosis and Deficiency Symptoms. 4

(c) Give the importance (physiological) of Vitamin B1. 4

OR

(d) Explain the deficiency of Vitamin C . 4

(e) Give the role of Vitamin K in body. 4

(f) Classify Vitamin and Minerals. 4

7. Discuss about spectrophotometry with principle and uses. 12

OR

Define chromatography, with principle and uses. 12

AQ–666A

B.Sc. (Part–I) Semester-II Examination

2S : FOOD SCIENCE

(Nutritional Biochemistry of Foods)

Time : Three Hours] [Maximum Marks : 80

Note :– (i) **ALL** questions are compulsory.

(ii) Diagrams and chemical equations should be given wherever necessary.

1. (A) Fill in the blanks with suitable word :

(i) The average Nitrogen content of proteins is _____%.

(ii) _____ is the enzyme present in the stomach of Infants.

(iii) _____ is the largest gland in human body.

(iv) The main salivary enzyme is _____. 2

(B) Choose the correct options :

(i) The enzyme of saliva that breaks down carbohydrate is :

(a) Protease

(b) Amylase

(c) Lipase

(d) Oxidase

(ii) Rickets is a disease called by the deficiency of :

(a) Vitamin A
(b) Vitamin C
(c) Vitamin D
(d) Vitamin B_3

(iii) In what form does the products of glycolysis enter the TCA cycle.

(a) Acetyl Co-A
(b) Pyruvate
(c) NADH
(d) Glucose

(iv) Iodine is a part of thyroid hormone and is essential for the prevention of :

(a) Goiter
(b) Osteoporosis
(c) Muscle weakness
(d) Diarrhea 2

(C) Answer in **one** sentence :

(a) What is Metabolism of food ?
(b) What is Glycogenesis ?
(c) What are Enzymes ?
(d) What is PER ? 1 each

2. Define Metabolism anabolism and catabolism of food in digestive system. Explain. 12

OR

Discuss about protein quality with nitrogen balance. 12

3. (a) Define Glycolysis. 4

(b) Give an account of functions of carbohydrates. 4

(c) Enlist the major pathways of carbohydrate metabolism. 4

OR

(d) Explain TCA cycle 4

(e) Explain the digestion of carbohydrate. 4

(f) Define role of Acetyl Co. A in carbohydrate metabolism. 4

4. (a) What are co-enzymes ? Give examples. 4

(b) Give the classification of enzymes. 4

(c) Discuss about enzymes specificity. 4

OR

(d) What is allosteric regulation of enzymes ? 4

(e) Describe the mechanism of enzyme actions. 4

(f) What is enzymes inhibition ? Explain any one. 4

5. (a) Explain the essential fatty acid. 4

(b) Discuss the digestion of fat. 4

(c) What are the effects of excess fat in body ? 4

OR