Total No. of printed pages = 3

FPT-403/BFC/4th Sem/2013/N/C

BASICS OF FOOD CHEMISTRY

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. (a) Define hydrolysis by giving examples. 2

   (b) Classify food on the basis of their chemical compositions. 3

   (c) Draw the structure of glucose and glyceraldehyde. 3

   (d) What is activation energy ? What are the different factors affecting the enzyme action? 6

2. (a) Explain the following terms : 2×5=10

   (i) Antioxidant

   (ii) Anthocyanin

[Turn over

(iii) Acidity

(iv) Sugar

(v) Free water.

(b) Explain in brief the role of chemist in food industries. 4

3. (a) What are the various reactions of monosaccharide ? 6

(b) What are the essential and non-essential amino acids ? Give two examples of each type. 4

(c) What is protein ? How a peptide bond is formed ? 4

4. (a) Distinguish between : 3×3=9

(i) Fats and Oils

(ii) Aldoses and Ketoses

(iii) Reducing and Non-reducing sugar.

(b) What are fat soluble vitamins ? 2

(c) Write three important functions of amino acid. 3

5. (a) What are fatty acids ? Give examples. 3

(b) What are lipids ? Write the important properties of lipids. 5

(c) Write a brief note on plant pigments. 6

6. (a) Draw the structure of any four amino acid. 4

(b) What are the different chemical changes it takes place during processing ? 6

(c) Explain in brief the different types of minerals in food. 4

7. (a) Write short notes on : 3×4=12

(i) Food enzymes

(ii) Cellulose

(iii) Starch

(iv) Food additives.

(b) What is hydrogenation ? 2