

## FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2017

(CUCBCSS-UG)

Food Technology

FTL 4B 07—FOOD CHEMISTRY AND ANALYTICAL INSTRUMENTATION

Time : Three Hours

Maximum : 80 Marks

I. Objective type (*All* questions are compulsory)

Match the following :

- |              |              |
|--------------|--------------|
| 1 Flavonoids | Glutein.     |
| 2 BHA        | Pigment.     |
| 3 Milk       | Antioxidant. |
| 4 Wheat      | Emulsion.    |

Fill in the blanks :

- Alanine is an
- Maltose is a
- \_\_\_\_\_ is mobile phase in HPLC.

State whether true or false :

- Oleic acid is an unsaturated fatty acid.
- Proteins are made up of amino acids.
- Cane sugar is called invert sugar.

(10 × 1 = 10 marks)

II. Answer any *five* questions :

- Classify the carbohydrates and give *one* example each.
- Write the structures of Threonine and tryptophan.
- Write the structures of any two saturated fatty acids and name them.
- Explain Rancidity in lipids.

**Turn over**

- 15 Write the structure of Chlorophylla.
- 16 Give one example of 'proteases' along with its reaction and potential application.
- 17 Classify chromatographic technique with reference to principle.

(5 × 2 = 10 marks)

III. Answer any *six* questions :

- 18 Write the difference between celluloses and hemicelluloses.
- 19 Describe denaturation in proteins comprehensively.
- 20 Explain in detail about the emulsions.
- 21 Give a brief account of enzyme specificity.
- 22 What are the advantages of using enzymes in food processing ?
- 23 Write a detailed account of dietary fibre.
- 24 Write short note food colloids.
- 25 Write short note on adsorption chromatography.

(6 × 5 = 30 marks)

IV. Answer any *two* questions :

- 26 Give a detailed account of starch and its importance in foods.
- 27 Classify the proteins from foods and describe the importance of each of them.
- 28 Explain in depth about the properties of solutions.
- 29 Explain in detail about Gas chromatography.

(2 × 15 = 30 marks)