

**FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION  
APRIL 2021**

**Food Technology**

**FTL 4B 07—FOOD CHEMISTRY AND ANALYTICAL INSTRUMENTATION**

**(2017 Admissions)**

**Time : Three Hours**

**Maximum : 80 Marks**

**I. Objective Type (All Questions are Compulsory) :**

**Multiple choices :**

- 1 Sucrose is a (Monosaccharide, Disaccharide, Polysaccharide).
- 2 Sugar present in milk (Lactose, Gluten, Zein).
- 3 RID is a detector of (HPLC, GC, FTIR).

**Answer in a single or two words :**

- 4 What is the principle of chromatography ?
- 5 Name any *two* essential amino acids ?

**Write True/ False :**

- 6 Glucose is a reducing sugar.
- 7 Enzymatic browning turns a cut piece of apple brown in colour.

**Fill in the blanks :**

- 8 \_\_\_\_\_ is a type of detector used in GC.
- 9 \_\_\_\_\_ is a pigment in turmeric.
- 10 \_\_\_\_\_ a SFA.

(10 × 1 = 10 marks)

**II. Short answer type questions (Answer any *five* questions) :**

- 11 Define enzyme activity.
- 12 Denaturation of proteins.
- 13 Explain about emulsions, with examples
- 14 What is rancidity ?

- 15 Write the classification of enzymes.
- 16 What is free and bound water ?
- 17 Define Colloids.

(5 × 2 = 10 marks)

III. Short essay questions (Answer any *six* questions) :

- 18 Explain retro gradation.
- 19 Write the role of Fibre in food.
- 20 What is the theory of emulsion formation ?
- 21 Describe the role of antioxidants in lipids.
- 22 Write note on essential amino acids and modified starches.
- 23 Write a note on chlorophylls.
- 24 What is the role of enzymes in food processing ?
- 25 Write a short note on properties of solutions.

(6 × 5 = 30 marks)

IV. Essay questions (Answer any *two* questions) :

- 26 Describe in detail about the chemistry of colloids and their role in foods.
- 27 Explain GC in detail. Illustrate about any *two* detectors used in GC.
- 28 Explain different structure of protein.
- 29 What are carbohydrates ? How these are classified ? Explain the identification method of any one sugar.

(2 × 15 = 30 marks)