

FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2021**Food Technology****FTL 4B 07—FOOD CHEMISTRY AND ANALYTICAL INSTRUMENTATION****(2014 Admissions)****Time : Three Hours****Maximum : 80 Marks****I. Objective type (All questions are compulsory) :****Multiple choices :****1 Pectin belongs to :**

(a) Polysaccharide.

(b) Disaccharide.

(c) Monosaccharide.

(d) Peptone.

2 Kjeldhal's method is used for the determination of :

(a) Carbohydrates.

(b) Protein.

(c) Fat.

(d) Minerals.

3 Emulsion is a type of colloid with :

(a) Liquid in liquid.

(b) Liquid in solid.

(c) Gas in solid.

(d) Solid in gas.

Fill in the blanks :**4 PUFA stands for _____.****5 The linkage between aminoacids in a protein is _____.****6 _____ is an example for oil in water emulsion****7 _____ is the enzyme that hydrolyses sucrose to glucose and fructose.****8 Gas Chromatography is useful to analyse _____ organic compounds.****Expand the following :****9. GC-MS.****10. PDA.**

- 3 Describe auto-oxidation in lipids.
- 4 Write the structures of Oleic acid and linoleic acid.
- 5 Name any two enzyme specificities.
- 6 Write the structures of a carotenoid and name it.
- 7 Describe R_f value in TLC and its importance.

(5 × 2 = 10 marks)

III. Answer any six questions :

- 1 Describe in detail about 'Gelatinization of starch'.
- 2 Write in detail about the classification of proteins.
- 3 Explain one method in detail for the determination of moisture in foods.
- 4 Describe the factors effecting the enzyme activity.
- 5 Write a brief account of properties of chlorophylls.
- 6 Describe the role of antioxidants in lipids.
- 7 Write a short note on fluorimetry.
- 8 Write a short note on emulsifying agents.

(6 × 5 = 30 marks)

IV. Answer any two questions :

- 1 Explain various methods useful for the determination of proteins.
- 2 Explain in depth about the tests for Rancidity in oils and fats.
- 3 Describe in detail about anthocyanins with respect to structure, chemical reactions and methods for their quantitative analysis.
- 4 Explain comprehensively about Beer-Lambert's law and its application.

(2 × 15 = 30 marks)