

C 3978

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Name.....

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2016

(CUCBCSS—UG)

Core Course—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. Sucrose | — | Monosaccharide. |
| 2. Fructose | — | Polysaccharide. |
| 3. Cellulose | — | Disaccharide. |

Answer in a single or two words :

4. Fats and Oils are made up of :
5. Give an example of flavanoid.
6. The linkage between two amino acids in a protein.

Say True or False :

7. All polysaccharides are digestible by human.
8. Antioxidants help in preventing rancidity.

Expand the following :

9. HPLC.
10. TLC.

(10 × 1 = 10 marks)

II. Answer any five questions :

1. Write the structures of any two pentoses.
2. Describe the role of antioxidants in lipids.
3. Write the structures of palmitic acid and linolenic acid.
4. Differentiate between free and bound water.
5. Name any two enzyme specificities.
6. Write the structure of Chlorophyll b.
7. Describe limit of detection and limit of quantification in HPLC.

(5 × 2 = 10 marks)

Turn over

III. Answer any six questions :

1. What is modified starch and describe its importance ?
2. Explain in depth about the classification of lipids.
3. Explain the following methods to test rancidity in oils and fats. (i) TBA method ; (ii) Active oxygen method.
4. Write a brief account of 'carotenoids' in foods.
5. Write the important classes of enzymes used in food industry and give one example each along with its reaction and potential application.
6. Write a short note on suspensions.
7. Give a detailed account of Ion exchange chromatography.
8. Write a short note on parts of spectrophotometers.

(6 × 5 = 30 marks)

IV. Answer any two questions :

1. Classify carbohydrates with examples and write a detailed account on properties of oligosaccharides along with crystallisation and inversion.
2. Write a detailed account on structure of proteins.
3. Give detailed account of rancidity in oils and fats along with mechanism.
4. Give detailed account of High pressure liquid chromatography.

(2 × 15 = 30 marks)