



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600 034

DEGREE EXAMINATION - FOOD CHEMISTRY AND FOOD PROCESSING

FIRST SEMESTER - NOVEMBER 2014

FP 1806 - ORGANIC CHEMISTRY OF FOOD - I

Date : 31/10/2014

Dept. No.

Max. : 100 Marks

Time : 01:00-04:00

Part A

Answer all the questions:

(10 x 2 = 20)

1. Give the structure of lactose and sucrose.
2. What is gel? Give its structure.
3. What is carboxy methyl cellulose?
4. Define synergism of antioxidants.
5. What is phospholipid? Give its chemical structure.
6. Differentiate oxidoreductase from transferases.
7. Mention the factors influencing concentration of enzymes in food.
8. Name the different forms of Vitamin K and draw the structure of any one form.
9. What is hydrogenation of oil?
10. What is enzymatic hydrolysis of food proteins?

Part-B

Answer any eight questions:

(8 x 5 = 40)

11. Write short note on the following.
a) retrogradation b) staling
12. Explain the solubility and viscosity of disaccharides.
13. What is Xanthan? Give its significance in food industry.
14. a) How do antioxidants prevent heart diseases and cancer?
b) What is tocopherol? Give its isomers.
15. Enumerate the difference between plant triacylglycerols and animal triacylglycerols.
16. Write short note on following.
a) Modification of fats b) Auto-oxidation of lipids
17. Discuss shortly the following.
a) Stereochemistry of amino acids b) Essential amino acids in humans
18. Explain the alkylation reaction of proteins.
19. How will you analyse protein by Biuret method?
20. a) What is ligase? Mention its function.
b) Write briefly about the uses of enzymes in color modifications of food.
21. Give in detail the classification and nomenclature of enzymes.
22. Explain the estimation of riboflavin from curry leaves by fluorescence method.

Part C

Answer any four questions:

(4 x 10 = 40)

23. a) What are aligns? Give the structure of aligns.
b) Mention any three application of PGA.
24. a) Give anyone method for determining the emulsifying properties of proteins in detail.
b) Discuss in detail primary, secondary and tertiary structure of proteins with suitable diagrams.
25. Write in detail any four methods to measure the lipid oxidation.
26. How will you evaluate the nutritive value of protein by BV and PER methods?
27. What are enzymes inhibitors? Explain in detail about the type of enzyme inhibitions.
28. a) Mention the classification of vitamins.
b) Discuss about the structure, stability and mode of degradation of vitamin C.