



Register Number:

Date: XX/10/2019

**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27**  
**M.Sc. FOOD SCIENCE AND TECHNOLOGY - I SEMESTER**  
**SEMESTER EXAMINATION: OCTOBER 2019**  
**FST 1319 – FOOD CHEMISTRY**

**Time- 2 1/2 hrs**

**Max Marks-70**

**This paper contains 2 printed pages and 4 parts**

**I. Answer any Five of the following**

**5x3=15**

1. Give the application and mode of action of protease.
2. Define cofactor, coenzyme, and holo enzyme.
3. Write a note on helical and  $\beta$ -sheet structure of protein.
4. Define and list the types of fatty acid.
5. What are the applications of sugar alcohols?
6. Define moisture sorption isotherm and its application in food industry.
7. Give the types of colloidal systems with example.

**II. Answer any Five of the following**

**5x5=25**

8. Discuss the methods and applications of immobilization of enzyme.
9. What are the functional properties of proteins?
10. Discuss the methods to determine the quality of protein.
11. Explain the various types of edible fats.
12. Give the mechanism of auto oxidation of fats and oils.
13. Discuss the effect of molecular mobility on the properties of frozen and dried foods.
14. What are the important properties of gel?

**III. Answer any Two of the following**

**2x10=20**

15. Discuss in detail general cause of variation/ loss of vitamins in foods.
16. Discuss the factors influencing rate of oxidation of lipids in foods.
17. Write detailed notes on the biological pigments of plant and animal origin and their behaviour during processing.

**IV. Answer the following**

18. a. If you have fresh fruit and freshly extracted fruit juice, which is the best way to get the carbohydrate and why? **5**

b. After eating, carbohydrates are digested and then absorbed into the blood. A surplus of glucose in the blood will be used to build up glycogen stores in the liver and muscle. How would it be possible to increase the body's capacity to store glycogen in either the liver or muscle? **5**