



25019743

QP CODE: 25019743

Reg No :

Name :

**B.Sc DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY
CHANCE EXAMINATIONS, FEBRUARY 2025**

Fourth Semester

B.Sc Food Technology & Quality Assurance

Core Course - FQ4CRT02 - FOOD CHEMISTRY

2017 Admission Onwards

92209B39

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Distinguish free water and bound water.
2. What are true solutions?
3. What are Anomers? Give examples.
4. Sucrose is a non-reducing sugar-Substantiate.
5. What are swelling starch?
6. Explain in brief on transamination.
7. What are complete, incomplete and partially incomplete proteins? Give examples.
8. What are omega-3 fatty acids? State its significance.
9. Define Reichert-Meissl Number and state its significance.
10. Give an account of competitive inhibition.
11. Define Km. State its significance.
12. State the function of chymosin.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Discuss the physical and chemical properties of water.





14. Discuss in detail the structure of starch and its chemical reactions.
15. State the importance of cellulose in diet. How can we modify cellulose to improve digestion and quality?
16. Account for different types of protein gelation. Describe the factors influencing gel properties.
17. Comment on protein modification used to improve function.
18. Explain different types of phospholipids and enumerate their functions.
19. Enumerate the chemical and physical changes caused by frying of oil.
20. Outline the characteristic features of active site.
21. Elaborate on Enzymatic browning.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. With the help of a diagram enumerate the structure of starch granule and describe in detail the process of starch gelatinization, retrogradation, pasting and staling.
23. Describe the structural organization of proteins and also add a note on bonds involved in protein structure.
24. Explain in detail on refining of fats and oils. Add a note on rancidity of fats and oils.
25. Write in detail on different endogenous enzymes used in food industry and their applications.

(2×15=30)

