QP CODE: 21102447

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) EXAMINATIONS, OCTOBER 2021

First Semester

B.Sc Food Science & Quality Control Model III

Core Course - FS1CRT02 - BASIC FOOD CHEMISTRY

2017 Admission Onwards

9FE9B283

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Define water activity.
2. Distinguish between macrominerals and microminerals.
3. Draw the straight and ring structure of glucose.
4. Draw the structure of lactose.
5. Discuss on any two tests for reducing sugars.
6. Name and draw the structure of sulphur containing aminoacids.
7. Discuss the reaction between aminoacid and benzaldehyde.
8. Discuss the role of enzymes in clarification of juice.
9. Distinguish between animal and plant fats.
10. Define polymorphism with example of butter fat.
11. Distinguish between carotene and xanthophyll.
12. Discuss on anthocyanins.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Discuss on gelatinisation of starch.

14. Explain Maillard reaction and its importance.

15. Discuss on denaturation of protein and agents causing it.

16. Explain the mechanism of competitive inhibiton.

17. Explain the mechanism of enzyme activators.

18. Explain the reaction along with significance and method of acid value.

19. Discuss on reversion and the factors affecting it.

20. Explain about antioxidants and their mechanism of action.

21. Discuss on chlorophyll and myoglobin with its effect on processing.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain in detail about the classification of carbohydrates with examples.

23. Explain the classification of protein according to the shape along with function and nutritional essentiality.

24. Formulate the Michaeli's Menten equation for enzyme kinetics and explain the factors affecting it.

25. Explain the refining of fat.

(2×15=30)