QP CODE: 25020754

Name Ξ.

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

Sixth Semester

B.Sc Food Science & Quality Control Model III

CHOICE BASED CORE COURSE - FS6CBT27 - BASIC FOOD ENGINEERING

2017 Admission Onwards

2DF9D904

Time: 3 Hours

Max. Marks: 80

Part A

Answer any ten questions. Each question carries 2 marks.

- Define Farad. 1.
- 2. Differentiate between moisture content on wet basis and dry basis.
- Define Reynolds Number with equation. 3.
- Differentiate between stagnation pressure and dyanamic pressure in fluid flow 4. measurement.
- 5. Define thermal diffusivity of food with equation.
- 6. Differentiate between Steady state and unsteady-state heat transfer.
- 7. Explain how particles are separated in a centrifuge.
- 8. Write about ribbon mixers.
- Explain different factors affecting the power requirement of a mixer. 9.
- 10. State Stoke's Law.
- 11. Define membrane separation. List out different types of membrane systems.
- 12. Differentiate between single effect and multiple effect evaporator

 $(10 \times 2 = 20)$

Part B

Answer any six questions. Each question carries 5 marks.



- 13. Derive equations of motion.
- 14. Explain the basic components of liquid transport system.
- 15. Explain the working of steam infusion heat exchanger with diagram.
- 16. Explain conductive heat transfer.
- 17. Explain in deatil about solvent extraction.
- 18. Differentiate between single screw extrusion and twin screw extrusion.
- 19. Name the membrane separation process suitable for desalting process. Give the reason.
- 20. Explain major types of membrane devices used for ultrafilteration.
- 21. Explain major types of evaporators used in refrigeration system.

(6×5=30)

Part C

Answer any **two** questions. Each question carries **15** marks.

- 22. Derive equation for velocity profile in liquid flowing under fully developed flow condition for laminar flow.
- 23. Classify heat exchanger and explain different heat exchangers with diagram.
- 24. Write note on (a) drum dryer (b) Fluidized bed drying (c)tunnel dryer.
- 25. Explain the working of spray drier and tunnel dryer with neat diagram.

(2×15=30)