



22101012

**QP CODE: 22101012**

**Reg No** : .....

**Name** : .....

**B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS,**

**APRIL 2022**

**Sixth Semester**

B.Sc Food Science & Quality Control Model III

**Choice Based Core Course - FS6CBT27 - BASIC FOOD ENGINEERING**

2017 Admission Onwards

DF4C6A33

Time: 3 Hours

Max. Marks : 80

**Part A**

*Answer any **ten** questions.*

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

1. State the law of gravitation with equation.
2. Differentiate between rotary pump and reciprocating pump.
3. Explain Entrance region and fully developed flow condition.
4. Differentiate between stagnation pressure and dynamic pressure in fluid flow measurement.
5. Define specific heat in thermal analysis of food with equation.
6. Differentiate between Steady state and unsteady-state heat transfer.
7. Classify different types of mixers.
8. State Kick's law with equation.
9. Define membrane separation. List out different types of membrane systems.
10. Differentiate between osmosis and reverse osmosis.
11. Discuss about ultrafiltration.
12. Define coefficient of performance with equation.





(10×2=20)

**Part B**

*Answer any **six** questions.*

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

13. Explain any five derived units.
14. Explain properties of liquids.
15. Explain the working of shell and tube heat exchanger with diagram.
16. Explain convective heat transfer.
17. Explain the theory behind centrifugation.
18. Explain the working of batch centrifugal filter with neat diagram.
19. Differentiate between cold extrusion and extrusion cooking.
20. Explain in detail about electrodialysis system.
21. Describe the working of natural circulation evaporator with neat diagram.

(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)

