



23105528

QP CODE: 23105528

Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS,
MARCH 2023**

Sixth Semester

B.Sc Food Science & Quality Control Model III

CHOICE BASED CORE COURSE - FS6CBT27 - BASIC FOOD ENGINEERING

2017 Admission Onwards

A1BE716B

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Formulate the dimension for Force.
2. Differentiate between newtonian and non newtonian fluids.
3. Explain Entrance region and fully developed flow condition.
4. Differentiate between stagnation pressure and dyanamic pressure in fluid flow measurement.
5. Define Thermal conductivity of food with equation.
6. Differentiate between Steady state and unsteady-state heat transfer.
7. Write about ribbon mixers.
8. Write down the application of mixing in food processing.
9. Define homogenisation and write any example for homogenised product.
10. Explain major components of extrusion system.
11. Define electrodialysis system. Write the equation for energy consumption.
12. Define evaporation. What are the factors which influence evaporation?

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Derive equations of motion.
14. Explain centrifugal pump and positive displacement pump in liquid transport system.
15. Explain the working of plate heat exchanger with diagram.
16. Explain radiative heat transfer.
17. Explain the separation of fluids with different densities with neat diagram.
18. Write down the application of filtration in food processing.
19. Explain in detail about reverse osmosis.
20. Explain major types of membrane devices used for ultrafiltration.
21. Describe the working of tunnel dryer 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. Explain different components of a refrigeration system.
25. Describe the process of dehydration and explain the mechanism of drying.

(2×15=30)

