QP CODE: 24000996

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

B.Sc Food Science & Quality Control Model III

CHOICE BASED CORE COURSE - FS6CBT27 - BASIC FOOD ENGINEERING

2017 Admission Onwards

88FFA811

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Define Weber.
2. Define porosity.
3. Define Reynolds Number with equation.
4. What is static pressure in fluid flow measurement?
5. Define Thermal conductivity of food with equation.
6. Differentiate between Steady state and unsteady-state heat transfer.
7. Define centrifugation.
8. What is solvent extraction?
9. Define Froude number with equation.
10. Define membrane separation. List out different types of membrane systems.
11. Discuss about ultrafilteration.
12. Differentiate between direct contact freezing and indirect contact freezing.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Derive equations of motion.

14. Explain pipes for fluids in food processing plants.

15. Explain the working of scraped surface heat exchanger with diagram.

16. Explain radiative heat transfer.

17. Explain any two vacuum filters.

18. Classify different methods of size reduction according to the size range of particles.

19. Explain in detail on single screw extruder with neat diagram.

20. Explain in detail about reverse osmosis.

21. Explain major types of condensers 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. Explain the working of spray drier and tunnel dryer with neat diagram.

25. Explain in detail about different types of evaporators used to obtain concentated liquid products.

(2×15=30)