

B. VOC. DEGREE (C.B.C.S.S) EXAMINATION, MARCH 2018**(2015 Admission Regular)****SEMESTER VI – CORE (FOOD PROCESSING TECHNOLOGY)****VFP6S21TB - UNIT OPERATIONS IN FOOD INDUSTRY****Time : 3 Hours Hours****Maximum Marks : 80****Part A****I. Answer all questions. Each question carries 1 marks****(6x1=6)**

1. Define heat conduction.
2. What is steam economy?
3. Define distillation process.
4. What is solid-liquid extraction?
5. Define bucket elevator.
6. What is the capacity of belt conveyor?

Part B**II. Answer any Seven questions. Each question carries 2 marks****(7x2=14)**

7. Differentiate between forced convection and free convection.
8. Which are the methods of conductive heat transfer?
9. What is the theory of food evaporation?
10. What is agitated film evaporator?
11. Define simple distillation.
12. What is orthorhombic system?
13. Define solid liquid extraction process.
14. Define leaching.
15. What is the theory of sedimentation?
16. Which are the equipments used for sedimentation?

Part C**III. Answer any Five questions. Each question carries 6 marks****(5x6=30)**

17. Write short notes on double pipe heat exchanger with neat diagram.
18. What are the advantages of forward feed evaporator?
19. What are the advantages of reverse feed evaporator.
20. Briefly explain flash distillation.
21. Briefly explain spray extraction tower with neat diagram.
22. Differentiate between single stage and multi stage extractor.
23. Briefly explain the mixers for low and medium liquids with neat diagram.
24. Write short notes on principle of centrifugal separation.

Part D**IV. Answer any Two questions. Each question carries 15 marks****(2x15=30)**

25. Explain in detail single effect and multiple effect evaporator with diagram.
26. Describe in detail the types of crystallizers used in food industry.
27. Explain with neat diagram supercritical fluid extraction.
28. Describe in detail with neat diagram the mixers used in food industry .