

QP CODE: 24027346



Reg No : .....  
Name : .....

**B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE  
EXAMINATIONS, OCTOBER 2024**

**Third Semester**

B.Sc Chemistry Model II Industrial Chemistry

**VOCATIONAL COURSE - CH3VOT03 - UNIT OPERATIONS IN CHEMICAL INDUSTRY**

2017 Admission Onwards

60248C8C

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Distinguish between cross flow and split flow of liquids in a distillation unit.
2. What is murphree plate efficiency?
3. List out the different types of packing material used in absorption column.
4. Define the term evaporation.
5. What are the important applications of wiped film evaporator?
6. Define filter medium.
7. What is sparkler filter?
8. What is centrifuge?
9. Explain the term equilibrium moisture content.
10. For what type of material are spray dryer suitable?
11. What do you mean by supersaturation?
12. What is nucleation?

(10×1=10)

**Part B**

*Answer any **six** questions.*

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





13. Azeotropic distillation can be used for separating alcohol. How?
14. Discuss the advantages and disadvantages of continuous distillation.
15. With the help of a neat diagram, explain the working of a mechanically agitated contractors.
16. Discuss about the advantages and disadvantages of natural circulation evaporator.
17. Explain the working and applications of climbing film evaporator.
18. Discuss the basic principle and working of nutsche filter.
19. Write a note on rotary dryer.
20. Write a note on fluid bed dryer.
21. With the help of a neat diagram explain the working of evaporator crystallizer.

(6×5=30)

### Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. What is rectification? With the help of a neat sketch, explain the principle and working of a rectification column.
23. Explain the different types of tower packing materials used in absorption.
24. Discuss in detail about the working of plate and frame filter press. What are its advantages and disadvantages?
25. With the help of a neat diagram explain the principle and working of a agitated crystallizer. How it is different from a tank crystallizer? Discuss the advantages and disadvantages of agitated crystallizer.

(2×10=20)

