

503

April 2024

Time – Three hours
(Maximum Marks: 100)

- [N.B.]***
1. Answer all questions under Part-A. Each question carries 3 marks.
 2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. What is unbound moisture?
2. What is shrinkage during drying?
3. What is ostwald ripening?
4. What are the various conditions for supersaturation?
5. List out any three applications of extraction.
6. List any three prime parts of a mixer settler cascade.
7. What is leaching?
8. What is the advantage of shanks system?
9. Write short notes on fuller's earth.
10. Mention any three industrial adsorbents with specific applications.

[Turn over.....]

PART - B

11. (a) Discuss the operating principles of a freeze drier.
(Or)
(b) With a neat sketch, explain the working of a tray drier.
12. (a) Compare the operations of an Oslo evaporative crystalliser and Draft tube baffle crystalliser.
(Or)
(b) Discuss the operation of a forced circulation evaporator with a neat diagram.
13. (a) Discuss a sieve plate column with a neat diagram.
(Or)
(b) Explain the uses of a triangular chart with a suitable example.
14. (a) Explain the factors affecting the rate of leaching with reasons.
(Or)
(b) Compare the operating principles of Bollman and Bonotto extractor.
15. (a) Discuss the agitated vessel for adsorption with a neat sketch.
(Or)
(b) Explain the temperature swing adsorption with a neat sketch.
