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Roll No

CM-702 (C) (GS)
B.E. VII Semester Examination, June 2020
Grading System (GS)
Novel Separation
Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. Tell two considerations in selecting extraction or distillation for the separation of a liquid mixture. What are the advantages of liquid-liquid extraction?
2. Discuss in detail various engineering problems associated with usage of membranes.
3. Explain the advantages and limitations of the various new separation techniques used in the chemical industries over conventional methods.
4. Describe different types of membrane modules with neat sketch used in membrane separation process.
5. Discuss the Foam Fractionation: Principles and Process Design based on the following points (i) Chain Length of the Surfactant (ii) Surfactant Concentration (iii) Solution pH (iv) Ionic Strength.
6. a) What is facilitated diffusional transport mechanism and in which membrane process it is mainly explained?
b) Write advantages and disadvantages of solid phase extraction.
7. a) Explain the concept of multicomponent separations giving suitable techniques and examples.
b) Write short notes on following:
 - i) Parametric pumping
 - ii) Column separations
8. Write a short note on any two of the following:
 - a) Screening and filtration
 - b) Nanofiltration
 - c) Centrifugation
