

M. Tech. Second Semester (Chemical Engineering) (CBS)
13012 : Advanced Separation Techniques : 2 CE 2

P. Pages : 1

Time : Three Hours



AW - 3722

Max. Marks : 80

- Notes :
1. All question carry marks as indicated.
 2. Answer in all **six** question.
 3. Due credit will be given to neatness and adequate dimensions.
 4. Diagrams and chemical equations should be given wherever necessary.
 5. Illustrate your answer necessary with the help of neat sketches.
 6. Discuss the reaction, mechanism wherever necessary.
 7. Use of pen Blue/Black ink/refill only for writing the answer book.

1. Explain in detail the applications of Cellulose Acetate membrane along with its advantages and disadvantages. **13**
2. Discuss in detail Symmetric and Asymmetric membranes. **13**
3. What are the different types of modules used in membrane processing? Explain them in brief. **13**
4. What are the different membranes used for Microfiltration? Explain in detail the process of Micro – Filtration. **13**
5. With a suitable example discuss in detail a industrial application of Reverse Osmosis membrane process. **14**
6. What is pervaporation? Explain the role of membranes in detail in the process of pervaporation. **13**
7. Explain the different parameters responsible for membrane performance. **13**
8. What is fouling? How can you control fouling of membrane? **13**
9. Explain the role of membranes in improving product quality of different items with suitable example. **13**
10. With suitable case study discuss in detail the working and applications of Membrane Bioreactor. **14**
