

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

P. Pages : 1

Time : Three Hours



AU - 3282

Max. Marks : 80

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

- | | | |
|-----|--|----|
| 1. | What are the different membranes used in the process of electrodialysis? Explain the process in detail with advantages & disadvantages. | 13 |
| 2. | With a neat sketch discuss the solution diffusion model in detail for mechanism of permeation through membrane. | 13 |
| 3. | Compare the processes of Reversed Osmosis and Ultrafiltration. | 13 |
| 4. | With a neat sketch explain in detail the working of a spiral module. | 13 |
| 5. | What is membrane fouling? Explain organic fouling in detail along with its control. | 14 |
| 6. | Discuss in detail the applications of Ultrafiltration membranes in Biotechnological applications. | 13 |
| 7. | What is the difference between a Bioreactor and Membrane Bioreactor? What are the advantages and disadvantages of a membrane bioreactor. | 13 |
| 8. | Compare the advantages and disadvantages of inline Microfiltration membranes and cross flow Microfiltration membranes. | 13 |
| 9. | Explain in detail the role of Membrane Technology for betterment of mankind. | 13 |
| 10. | What is pervaporation? Discuss its industrial applications in brief. | 14 |

http://www.sgbauonline.com

Whatsapp @ 9300930012

Your old paper & get 10/-

पुराने पेपर्स भेजे और 10 रुपये पायें,

Paytm or Google Pay से