

M.Tech. First Semester (First Year) (Membrane & Separation Tech.) (F.T.)
13024 : Membrane Separation Process : 1 MST 2

P. Pages : 1

Time : Three Hours



AU - 3267

Max. Marks : 80

- Notes :
1. Answer **Any six** questions.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 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 book.

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| 1. | Explain the basic principle of membrane separation process. Draw schematic representation of the process. | 14 |
| 2. | Describe the classification of membrane process on pressure driven process. Explain their applications. | 13 |
| 3. | What are the types of synthetic membrane? Explain their morphology. | 13 |
| 4. | Write the advantages & applications of various membrane modules. | 13 |
| 5. | With neat sketch explain the phenomenon of reverse osmosis. Write the application in chemical industry. | 14 |
| 6. | Describe concentration polarization. Is it reversible? | 13 |
| 7. | Discuss what are the various reasons of flux reduction? How is it recovered? | 13 |
| 8. | Discuss the applications of Gas separation membrane process in chemical & biochemical industries. | 13 |
| 9. | Explain the membrane separation application in dairy industry for pollution control. | 13 |
| 10. | Explain the role of membrane in pollution control. | 13 |
