

Total No. of Questions : 6]

SEAT No. :

P268

[Total No. of Pages : 2

Oct./BE/Insem. - 586

B. E. (Chemical Engineering)

MEMBRANE TECHNOLOGY

(2015 Course) (409344B) (Semester - I) (Elective - I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary.

- Q1) a)** Explain the following terms **[5]**
- i) Separation factor
 - ii) Molecular weight cut off

- b) Give benefits and drawbacks of membrane process over conventional technology. **[5]**

OR

- Q2) a)** Discuss in details the classification of the membrane on the basis of structure. **[5]**
- b) Explain in details material and its properties used for membrane preparation. **[5]**

- Q3) a)** Explain in details immersion precipitation technique of membrane casting. **[5]**
- b) Give short notes on casting solution modifier with suitable examples. **[5]**

OR

P.T.O.

- Q4)** a) Explain with neat sketches hollow fiber module. [5]
b) Discuss in details characterization of membranes. [5]
- Q5)** a) Explain solution diffusion model for dialysis. [5]
b) Differentiate membrane fouling and concentration polymerization with suitable examples. [5]

OR

- Q6)** a) Explain in detail pore flow theory for microfiltration. [5]
b) Discuss in details transport through the porous and nonporous membrane with the suitable equation. [5]
