Unit 13 - Week 11: Process Intensification by membrane

Assessment 11

The new factor in order to understand this section has been presented.

For the process intensification by membrane:

1. The membrane separation technique is competing with other separation technologies in terms of:
   - Energy efficiency
   - High reject capacity
   - Cost of energy and capital investments
   All of the above

2. Membrane characteristics include:
   - Porosity
   - Permeability
   - Selectivity
   All of the above

3. Natural water and industrial effluent fall in which category of membrane operations:
   - Desalination
   - Chromatographic
   - Reverse osmosis
   - Dialysis
   None of the above

4. The degree of selectivity of a membrane is largely dependent on the:
   - Membrane thickness
   - Impact of the membrane
   - Temperature difference between two phases
   None of the above

5. The permeation selectivity of the membrane:
   - Pressure of the membrane
   - Pressure of the solution
   - Temperature of the solution
   None of the above

6. Membrane separation is classified as:
   - Physical separation
   - Electrical potential
   - Gas-based separation
   - Chemical-based separation
   None of the above

7. Membrane separation is used in:
   - Filtration of liquids
   - Filtration of gases
   - Filtration of solids
   - Filtration of solutions
   None of the above

8. The main types of membranes are:
   - Nano-films
   - Ultra-films
   - Micro-films
   - All of the above

9. The main applications of membranes are in:
   - Waste treatment and reclamation
   - Waste treatment and recycling
   - Waste treatment and reuse
   - All of the above

10. The main characteristics of membranes are:
    - Permeability
    - Selectivity
    - Energy efficiency
    - All of the above

11. The main factors that influence membrane performance are:
    - Membrane thickness
    - Temperature difference
    - Pressure difference
    - All of the above

12. The main advantages of membrane technology are:
    - Low energy consumption
    - High efficiency
    - High selectivity
    - All of the above

13. The main applications of membranes are:
    - Desalination
    - Dairy processing
    - Waste treatment and reclamation
    - All of the above

14. The main categories of membranes are:
    - Nanofiltration
    - Ultrafiltration
    - Microfiltration
    - All of the above

15. The main factors that influence membrane performance are:
    - Membrane thickness
    - Temperature difference
    - Pressure difference
    - All of the above

16. The main characteristics of membranes are:
    - Permeability
    - Selectivity
    - Energy efficiency
    - All of the above

17. The main advantages of membrane technology are:
    - Low energy consumption
    - High efficiency
    - High selectivity
    - All of the above

18. The main applications of membranes are:
    - Desalination
    - Dairy processing
    - Waste treatment and reclamation
    - All of the above

19. The main categories of membranes are:
    - Nanofiltration
    - Ultrafiltration
    - Microfiltration
    - All of the above

20. The main factors that influence membrane performance are:
    - Membrane thickness
    - Temperature difference
    - Pressure difference
    - All of the above

21. The main characteristics of membranes are:
    - Permeability
    - Selectivity
    - Energy efficiency
    - All of the above

22. The main advantages of membrane technology are:
    - Low energy consumption
    - High efficiency
    - High selectivity
    - All of the above

23. The main applications of membranes are:
    - Desalination
    - Dairy processing
    - Waste treatment and reclamation
    - All of the above