

## **ASSIGNMENT**

- 1. Give in brief the history of manufacture of fermenter?*
- 2. What are the basic components of the fermenter?*
- 3. What is upstream manufacturing?*
- 4. What is a bioreactor?*
- 5. Mention the general requirements of the bioreactor.*
- 6. Explain in detail the downstream processing.*
- 7. What is bio-processing and describe its various stages?*
- 8. Briefly mention the aeration system of industrial fermentors.*
- 9. Discuss basic attributes of a fermenter for microbial or animal cell culture.*
- 10. Mention the types of bioreactor, describe two of them.*