

**SARDAR PATEL UNIVERSITY**  
**Programme: BSC (MICROBIOLOGY)**  
**Semester: VI**  
**Syllabus with effect from: November 2013**

<b>Paper Code:</b> US06CMIC06	<b>Total Credit: 3</b>
<b>Title Of Paper:</b> Industrial Microbial Technology	

Unit	Description in detail	Weighting (%)
<b>1</b>	Downstream processing Criteria for the selection of recovery process. Separation of cells by filtration and centrifugation Disruption of microbial cells Liquid: Liquid extraction of fermentation products Product concentration by Precipitation, reverse osmosis and ultrafiltration	
<b>2</b>	Quality control of fermentation products-Sterility testing and LAL test. Bioassay of fermentation products Immobilization Fermentation economics	
<b>3</b>	Industrial production of : Beer, Vinegar, Cheese, Bakers Yeast, Glutamic acid	
<b>4</b>	Fermentative production of : Penicillin and its conversion to semisynthetic derivatives, Gluconic acid, Cyanocobalamin, Acetone-butanol-ethanol, Amylase ( $\alpha$ - amylase only)	

**Basic Text & Reference Books:**

- Principles of Fermentation Technology - Stanebury ,Whitaker and Hall
- Industrial Biotechnology - Crueger and Crueger
- Industrial Microbiology - A.H. Patel
- Fermentation technology - H. A. Modi
- Industrial Microbiology - Cassida, L.E.
- Microbial Technology - Peppler and Perlman

