

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: VI

Textile Production

Subject Name: **Chemistry and Applications of Textile Auxiliaries**

Subject Code: **162803**

| Teaching Scheme | | | | Evaluation Scheme | | |
|-----------------|----------|-----------|-------|------------------------------------|---------------------------------|------------------|
| Theory | Tutorial | Practical | Total | University Exam (Theory) (E) | Mid Sem Exam (Theory) (M) | Practical (I) |
| 3 | 0 | 0 | 3 | 70 | 30 | 50 |

| Sr. No | Course Content | Total Hrs. |
|--------|--|------------|
| 1. | Theory of Surface Activity - Surface tension, HLB, Critical micelle concentration, Solubility and Kraft point, Angle of contact etc. | 10 |
| 2. | Classification, Chemistry and properties of surface active agents. | 05 |
| 3. | Technology and applications of preparatory process auxiliaries such as detergents, wetting agents, mercerizing wetting agents, stain removers etc. | 09 |
| 4. | Dyeing auxiliaries such as dispersing agents, leveling agents, rubbing fastness improvers, dye fixing agents, defoaming agents, carriers etc. | 09 |
| 5. | Printing auxiliaries such as accelerators, hygroscopic agents, wetting agents, antifoaming agents etc. | 08 |
| 6. | Finishing auxiliaries: Principle of emulsification- emulsion & microemulsion, softeners etc | 09 |
| 7. | Specialty surfactants such as fluorosurfactants, silicone surfactants etc. | 04 |
| 8. | Biodegradability of different surface active agents. | 02 |

Practical:

This shall be based on prescribed syllabi.

Text Books:

1. Chemistry of Organic Textile Chemicals - Shenai V. A.
2. Chemistry of Textile Auxiliaries - Shenai V. A.

Reference Books:

| | | |
|----|--|---------------|
| 1. | Handbook of Surfactants | Porter |
| 2. | Emulsion & Emulsion Stability | Sjoblom |
| 3. | Chemistry of Textile Auxiliaries | Trivedi S. S. |
| 4. | Industrial Applications of Surfactants | Karsa D.R. |
| 5. | Textile auxiliaries and finishing chemicals. | Vaidya A.A. |