

**SARDAR PATEL UNIVERSITY**  
**Programme & Subject: M.Sc (Surface Coating Technology)**  
**Semester: III**  
**Syllabus with Effect from: June - 2015**

<b>Paper Code: PS03ESCT03</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Technology of Packaging &amp; Printing Inks</b>	

Unit	Description in Detail	Weightage (%)
I	Difference between Paints and Inks- Formulation, manufacturing & Application basis. The different printing Processes like Gravure, Flexographic, Screen, Lithography, Letterpress, inkjet, Photostat copier - their merits and demerits.	35 %
II	Classification of Inks on the basis of Printing Processes. Their manufacturing techniques. Quality control of Inks. Methods of Ink Drying.	
III	Specialty Inks (Antiforgery/Security). Behavior of Inks on machines; Trouble shooting in various printing processes; Storage stability of Inks	
IV	Elements of packaging, natural packaging, packaging values, Professional approach to develop package for food products, general consumables, cosmetics, pharmaceuticals, engineering materials and other utilities.	25 %
V	Packaging materials and their forms. Paper and paper board, folded cartons and setup boxes, corrugated board, box construction, interior packing's, moulded forms, paper composites, tetra pack, wood containers, glassware's.	20 %
VI	Plastic as packaging material in different forms- flexible polymeric films, metallic foils, orientation and metallization. Metal containers- tin plate cans, tin free steel cans and tempers, coatings and linings, aluminum cans, collapsible tubes, fiber tubes, Aerosols-principle, valves. Coatings and lamination, paper films and foils for lamination, adhesives, labels and labeling, heat transfer labels, coding and holograms etc. Package printing importance, Package disposal, Eco-Friendly packing's, Innovations in packaging: Active packaging, anti microbial containers, RFID technologies.	20 %

**Basic Text & Reference Books:-**

- Printing Ink Manual; by R. H. Leach & R. J. Pierce
- Handbook on Printing Technology
- Modern Printing Technology
- Complete Book on Printing Technology
- Handbook of Package Engineering by Joseph F. Hanlon
- Edible Coatings & Soluble Packaging by Roger Daniels

