

DEPARTMENT OF PRINTING AND PACKAGING TECHNOLOGY

SE : III SEM (CBGS)

Subject: Applied Mathematics -III (PPC301)

CO1. Obtain the Laplace Transform and inverse Laplace Transform using standard results and properties.

CO2. Apply the concept of eigen values and eigen vectors to engineering problems.

CO3. Expand the periodic functions using Fourier series and complex form of Fourier series, understand the concept of half range sine and cosine series.

CO4. Perform calculation with operators gradient, divergence and curl.

CO5. Use binomial poisson and normal distribution to solve statistical problems.

CO6. To analyse the problem by using large and small sampling theory.

Subject: Principles of Packaging Technology (PPC302)

CO1. Effectively observe and compare the different package forms.

CO2. Describe the importance of compatibility studies and their associated parameters.

CO3. Analyze the various hazards & environmental issues related to Packaging.

CO4. Predict the application packaging technology as a whole.

CO5. Analyze the various hazards & environmental issues related to packaging

CO6. Explain significance of packaging in terms of today's market

Subject: Introduction to Printing Technology (PPC303)

CO1. Distinguish various printing principles like planography, intaglio & relief.

CO2. Compare the process of image generation on the basis of typography, reprography & layouting.

CO3. Distinguish the various press configurations of offset, gravure, flexo & letterpress.

CO4. Recognize various materials used in printing operations and distinguish print finishing operations

CO5. Explain various types of ink available for printing and their properties.

CO6. Select an appropriate printing technology for any given printing job.

Subject: Paperbased Packaging Materials(PPC304)

CO1. Explain the raw materials and operations involved in pulping and paper making process

CO2. Identify and describe the manufacturing process for different types of paper based

CO3. Design and estimate material requirements for major forms of paper based packaging.

CO4. Test and analyze the major properties of paper based packaging materials.

CO5. Explain various design aspects for various types of package forms made up of paper

CO6. Explain various quality control & testing procedures for paper package

Subject: Principles of Graphic Arts and Design (PPC305)

CO1.Create a design based on specific requirement.

CO2.Analyze and demonstrate the use of particular colour & text appropriately in the designs.

CO3.Generate various design layouts with proper visual impacts.

CO4.Create a design with different softwares used for designing purpose.

CO5.Identify the tools involved in recreating a design

CO6.Examine the process involve in desinging a job

Subject: Material Science and Technology (PPC306)

CO1.Point out effectively various materials and their feasible applications involved in packaging & printing technology.

CO2.Explain the materials on the basis of their chemistry.

CO3.Identify and examine various significant properties required for a specific material for a particular application.

CO4.Explain electrical, magnetic and chemical properties of materials used in Printing and packaging industry.

CO5.Analyse any given material through advanced technologies like SEM

CO6.Discuss the role of smart and nano materials in Packaging and printing industry.

Subject: Screen Printing Laboratory (PPL301)

CO1. Prepare screen printing image carrier by direct, indirect photographic methods.

CO2. Demonstrate the use of different photographic films for mesh preparation according to image.

CO3. Produce different printed samples for various substrates like fabric, glass, acrylic, wood by selecting suitable inks & coatings for that material.

CO4. Produce & analyze a halftone dot image generated for four color printing and registration of color.

CO5. Familiarize with equipment and chemicals used for screen printing

CO6.Printing of two color job on textile and paper materials

SE : IV SEM (CBGS)

Subject: Plastics in Packaging (PPC401)

- CO1. Describe the various polymerization mechanisms and techniques.
- CO2. Differentiate between thermoplastics & thermosets.
- CO3. Effectively communicate the relation between effects of temperature and crystallinity of polymers.
- CO4. Identify and categorize various plastics by chemical and instrumentation methods.
- CO5. Choose a plastic material for a specific application based on their physical and chemical
- CO6. Describe the properties that are important from the point of view of plastic processing.

Subject: Glass, Metal and Textile Based Packaging (PPC402)

- CO1. Describe & interpret the various manufacturing process for glass bottles, metal cans & tubes and textile based bags.
- CO2. Explain various design aspects for various types of package forms made up of glass & metal.
- CO3. Summarize the aerosol technology and its wide application in packaging.
- CO4. Discuss various quality control and testing procedures for these package forms
- CO5. Describe the basics of fabric & textile tech. to produce bags of various materials.
- CO6. Analyse the packages made of Glass, metal & textiles for operations involved.

Subject: Digital Imaging & Colour Management (PPC403)

- CO1. Discuss & summarize the conventional and digital method of colour separation.
- CO2. Examine images and modify them with colour correction.
- CO3. Measure the densitometric terms and analyze graphically for printed samples.
- CO4. Summarize the spectrophotometric terms and perform relative measurements of various printed samples.
- CO5. Recognize the input & output devices being used.
- CO6. Analyze input & output devices, create profiles and demonstrate their results.

Subject: Offset Printing (PPC404)

- CO1. Describe the various terminologies in offset printing process.
- CO2. Operate offset machines and evaluate single colour sheet feed press.
- CO3. Identify and rectify suitable solutions for errors associated with platemaking and pressroom.
- CO4. Analyze troubles related with quality and can produce possible remedies to minimize print problems.
- CO5. Analyze the costing of commercial printing jobs
- CO6. Examine the process involve in manufacturing and finishing the products

Subject: Digital Electronics and Microprocessor (PPC405)

CO1.Describe any logical expression using basic gates

CO2.Discuss the combinational & sequential circuits like encoder, decode.

CO3.Discuss the sequential circuits like flip-flop, registers & counters.

CO4.Summarize the need and functioning of microprocessor in various machines of packaging and printing technology.

CO5.Describe 8086 architecture and programming.

CO6.Analyse possible applications of microprocessors in various machines of packaging and printing technology.