# Prospectus & Syllabus

## GRADUATE DIPLOMA IN PACKAGING

THROUGH CORRESPONDENCE

2014

#### Accredited by :



The Asian Packaging Federation

#### Conducted by:



E-2 MIDC Area, Post Box. No. 9432 Andheri (E), Mumbai 400 093.

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#### **BACKGROUND:**

There is more to packaging than meets the eye. Packaging is recognised as major industry in all the developing countries. This is not surprising as all the products manufactured or processed are packed in some way or the other. With trade barriers vanishing in many countries, export has increased, demanding more and more from packaging. Packaging is becoming a highly competitive field. It embraces various disciplines of science and technology. With the increasing importance of packaging and its growth, there would be growing opportunities for packaging professionals in their career.

It is a challenging task to accquire additional knowledge for the persons who are employed or engaged in business activities. The Distance Education Programme offers the best opportunity to such people to update their knowledge position, experience and accept higher responsibilities, on completing the course.

#### **COURSE CURRICULLUM:**

Packaging is a multi-faceted activity. It protects, preserves and sells the product at optimum cost. Protection, preservation and marketing involves understanding of environmental concerns, related laws, its economics and management besides knowledge of Packaging Technology.

The Course covers study of basic packaging materials like Paper, Paperboard, Glass and Metal Containers, Plastics, Films, Laminates, Cushioning Materials, Ancillary Materials and other conventional and modern forms of packaging used in Food, Pharma, Engineering and other Industries. It also covers packaging techniques and processes, quality control and evaluation test and other management topics like standardisation, packaging cost and economics etc.

The Correspondence Course is designed to develop packaging persons who can find opportunities in marketing, purchase, design and development, quality assurance and package processing of any industrial unit - be it a package manufacturer or a package user.

#### **METHODOLOGY:**

Candidates registered for the Course would be given course material for reading in advance.

#### **EXAMINATION:**

Examination will be conducted at the end of 18 months. A student also has to submit an essay on a prescribed topic before the examination.

The examination would be conducted at **Indian Institute of Packaging.** Mumbai or at its other offices at Kolkata, Delhi, Chennai & Hyderabad. The candidates are expected to attend the examination at his/her own cost. (For overseas candidate examination can be arranged at their place / country with prior intimation.)

The examination will consist of four papers of 100 marks each and dissertation in the form of essay of 100 marks. Papers I to IV will be set to cover topics from Packaging Technology Education Volumes - Set 1 to 4 respectively given to the registered candidates.

A candidate can appear for examination on payment of reexamination fee within 3 years, for maximum three times, after registration. The minimum marks for passing the Graduate Diploma examination would be 40 percent in each head of passing and 50 percent in aggregate.

#### **COURSE DURATION:**

The course is of one and half year duration.

#### **ELIGIBILITY:**

Degree in Science / Engineering / Technology / Commerce / Arts from recognised university with 1 year working experience or Diploma from recognised technical board in Engineering / Technology with 2 years working experience are eligible for the course.

#### **COURSE FEES:**

Tuition fee: Rs. 50,000 + Service Tax @ 12.36% for Indian participant and for Overseas participant US \$ 1000 /- (Including Form fee & Service Tax).

#### **RE-EXAMINATON FEE.**

For re-examination, after 1st attempt fee of Rs. 1000/- will be payable for every examination.

#### **COURSE MATERIAL:**

Course material in the form of Packaging Technoloy Educational Volumes Set 1 to 4 along with Model Questions would be sent to the candidates on registration.

#### LIBRARY:

Tho students would be given identity cards by I.I.P. These cards must be produced at the time of library reference work.

#### **CERTIFICATE:**

The Distance Education Programme is accredited by Asian Packaging Federation. The successful student would be given a Certificate titled . "Graduate Diploma in Packaging".

#### **REGISTRATION /ADMISSION:**

Application form along with Prospectus and Syllabus can be obtained from any centers of Indian Institute of Packaging by paying Rs. 100/- only by DD in favor of Indian Institute of Packaging.

The application forms should be sent directly to the "Indian Institute of Packaging, Mumbai" along with the fee by Demand Draft in favor of Indian Institute of Packaging, payable at Mumbai. Fee can be paid in 2 instalments i.e. Rs. 40,000 + Taxes payable along with application form and Rs. 10000 + Taxes within 6 months. Fee once paid will not to be refunded.

The application form can also be downloaded from website. Form fee of Rs. 100/- is to be added in 1st instalment of Fee.

Commencement of Course: 1st January, 2014

Examinations : 1<sup>st</sup> / 2<sup>nd</sup> week of June, 2015

#### **SYLLABUS**

#### 1) EXAMINATION PAPER I - VOLUME I

Packaging - A Total Concept, Packaging & Productivity, Package Components. Export Packaging, Transit Hazards - Road, Rail, Sea & Air - Test Procedures for Evaluation of Transport - worthiness

(i) Physical (ii) Environmental, Protection Against Handling, Transport and Storage Hazards - Road, Rail, Sea, Air, Product Characteristics - Physical / physico - Chemical, Biological, Physical Characteristics of the Product - Physical State, Weight, Center of Gravity, Fragility, Rigidity & Surface Finish, Packaging Components, Separation, Clearance Support, Positioning, Cushioning, Weight Distribution, Suspension and Closure

### Test Procedure for Packaging Materials & Packaged Products Compatibility of the Package

Manufacture & Properties of Packaging Paper and Board, Mineral Coating on Paper, Speciality Papers for Packaging, Folding Board Cartons & Coated Carton - Manufacture, Types & Applications, Corrugated Board, Box Styles and its Economics, Solid Fibreboard as a Transport Pack, Composite Container and its Applications. Multiwall Paper Sacks, Cellulosic Films

Plastics, Thermoforming in Packaging, Co-extrusion, Extrusion - Stretch Blow Moulding. Low Density Polyethylene, Linear Low Density Polyethylene. High Density Polyethylene. High Molecular High Density Polyethylene, Polypropylene - Properties and Applications in Packaging, Biaxially Oriented Polypropylene Films, Polystyrene - Properties, Processing and Applications, PVC in Packaging, Nylon - 6 Film, Polyester Film, Identification of Plastics, Expanded Polystyrene, Expanded Polyethylene, Plastic Woven Sacks, Polycarbonate (PC)

#### 2) EXAMINATION PAPER II - VOLUME 2

Packaging In Glass Containers, Glass Containers Properties, Testing Methods.

Manufacture of Black Plate, Tin Plate Characteristics and Properties, Tinplate Containers, Two Piece Metal Cans, Internal Food Can Lacquers, G. I. Drums - Oil Drums - Closures Manufacture And Usages, Aluminium Foil - Manufacture, Properties and Applications in

Packaging, Aluminium Collapsible Tubes and Containers, Aerosol, Aerosol Packaging Technology, Seals Closures, and Pilferproof Caps

Wooden Containers, Seasoning of Timber for Packing Cases, Crates

Adhesives for Packaging Industries, Laminates, Laminated Tubes - Manufacture, Properties, Applications, Flexible Packaging - Laminates and Coatings - Applications, Role PVDC Coating in Packaging, Labels, & Labelling.

#### 3) EXAMINATION PAPER III - VOLUME 3

Printing, Printing Techniques, Gravure, Flexography, Inkjet Printing for Coding, Marking Applications, Surface Design and Sales Appeal, Graphic and Surface Design, Printing Inks, Bar Coding, Reinforcements on Distribution Packages, Corrosion Prevention in Packaging, Principles of Corrosion and its Impact on Packaging

Adhesive Tapes, their Manufacture, Properties & Limitations, BOPP Pressure Senstive Tapes

Cushion Design, Prevention of Shock Damage to Articles by various means and Measurement of Shock, Cushioning Materials and their Applications, Plastic Corrugated Board

Statistical Quality Control, Statistical Quality Control and its Role in Quality Assurance, Quality Control - Specifications and Performance Requirements of Fibreboard Boxes, Packaging Quality Control, Testing Methods for Evaluation of Transport Packages

Containerisation, Containerisation and Multimodal Transport System.

Containerisation Concept, Intermodal Containers - its Impact on Packaging

Packaging of Access and Spares - Skin. Blister and Shrink Packaging, Stretch Wrapping Systems. Strip Packaging, Blister Packaging

Form - Fill - Seal Machine (systems), Developments in Packaging of Stand-up Pouches. Blow Moulding Machines, High Flow PEs - a New Trend in injection Moulded Containers

#### 4) EXAMINATION PAPER IV -VOLUME 4

Packaging of Processed Food Products, Dehydrated. Ready to use Foods, Packaging of Meat, Fish & Poultry, Packaging of Fresh Foods, Packaging of Dairy Products, Packaging of Biscuits, Bread & Confectionery, Packaging of Fruit Juices, Aseptic Packaging - Sterillzation of Packaging Materials, Using Aspetic System, Aseptic Packaging, Sterilization by Irradiation, Radiation

Sterilization - Process Norms, Guidelines & Applications, Packaging of Horticultural Crops

Packaging of Pharmaceutical Products - injectibles, Packaging of Pharmaceutical Products - Orals

Packaging of Textiles. Packaging of Fertilizers & Chemicals, Developments and Trends in the Field of Packaging of Chemicals, Packaging of Fertilizers, Packaging in Pesticides Industry

Packaging of Soaps and Detergents, Packaging of Cosmetics, Packaging of Handicrafts for Exports. Packaging Hazardous Chemicals, Packaging of Light Engineering Goods, Packaging of Heavy Engineering Goods, Vaccum Packaging, Packaging Management, Package Design - An Important Marketing Tool, Systems Approach to Packaging, Systems Packaging, Scientific Packaging and Loss Prevention. Packaging Needs for Export. Basic Concepts in Standardisaton, Packaging Standardisation and Physical Distribution, Standards - Basic Concepts, Packaging Materials, Rigid & Ancillary Materials and Export Packaging. Packaging Economics, Maximising the Container Utility in Relation to the Product, Packaging Cost, Cost Reduction in Packaging, Inventory Control, Value Analysis and Value Engineering, Packaging Laws, Consumer Protection In Food Packaging, Marking and Labelling, Eco-friendly Packaging for Exports.

#### 5) ESSAY ON A SELECTED TOPIC

Details will be given separatery.

#### SERVICES OFFERED BY INDIA INSTITUTE OF PACKAGING

- Post Graduate Education
   Certificate Course
- Executive Development Programmes
   Unit Based Programmes
- Research Technical Consultancy Testing, Development
- Shelf Life Studies Standardisation Testing Equipment Development
- Techno Economic Feasibility Studies
   Market Research
- Graphic Design
   Industrial Photography
   Data Base
- Information
   Library
   Publications,



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