



**SENIOR SCHOOL**  
**CURRICULUM**  
**2016-17**  
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**VOLUME-IV**  
**(PART-4)**

**Media, Entertainment and  
Production Based Courses**

**CENTRAL BOARD OF SECONDARY EDUCATION**

**“SHIKSHA KENDRA”, 2, COMMUNITY CENTRE, PREET VIHAR, DELHI – 110 301”**

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# MEDIA, ENTERTAINMENT AND PRODUCTION BASED COURSES

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1. FASHION DESIGN & GARMENT TECHNOLOGY
  2. TEXTILE DESIGN
  3. DESIGN & INNOVATION
  4. MUSIC TECHNICAL PRODUCTION
  5. MASS MEDIA STUDIES AND MASS MEDIA PRODUCTION
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# FASHION DESIGN & GARMENT TECHNOLOGY

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## Introduction

Fashion is dynamic and ever changing. It is one of the most powerful forces in our lives. It influences every facet of our lifestyle at a particular period in time e.g. the clothes we wear, the music we listen, the food we eat, where we go for holiday or the car we drive in etc.

Fashion is a big business and key driver for several industries e.g. apparel, accessories, textiles, automobiles etc.

The purpose of the stream of Fashion Design and Garment technology under the broad head of Professional Competency Education is to tell the students about the fundamentals of fashion design and production of garments. Fashion Design as profession includes the entire process of designing and producing fashion apparels from the fibre and yarn stage to the finished product. The papers of this course will give an overview of fashion design and elaborate on different aspects like elements of design, history of fashion, fabrics, and understanding of the body, pattern development and garment construction.

## Employment Opportunities

- (a) As beginner assistants to designers of apparel.
- (b) As coordinators for sampling houses of apparel.
- (c) As liaison officers between production and merchandising departments of any export/ retail set-up in the field of apparel.
- (d) As assistants in product development department.
- (e) The Programme will helps students setup boutiques and small scale manufacturing setups.

## Objectives of the Course

The main objective of the course is to develop professional competency and employable skills in the fields of Design (apparel) and technology (garment related).

The specific objectives are

- ) To develop and initialize a design vocabulary, an essential tool for practicing as designers.
- ) To introduce the students to garment making.
- ) To understand the fashion business.
- ) To gain knowledge of the working and interrelationships of different industries and services that comprise fashion business.
- ) To introduce students to the world of fashion designing through pattern development.
- ) To develop employable skills in designing of apparel.
- ) To develop employable skills in assembly of garments.
- ) To develop employable skills in the field of export of apparel.

**SCHEME OF STUDIES**  
**FASHION DESIGN AND GARMENT TECHNOLOGY**

**CLASS–XI**

1	2	3			4			5	
S. No.	Subject	Period/Week			Examination			Total Marks	
		Th.	Pr.	Total	Marks (Th.)	Hrs.	Marks (Pr.)	Hrs.	
1.	Introduction to Fashion Industry.	3	4	7	50	2.5	50	2.5	100
2.	Elements of Design & Fashion.	3	4	7	50	2.5	50	2.5	100
3.	Garment Construction.	3	4	7	50	2.5	50	2.5	100

**CLASS–XII**

1	2	3			4			5	
S. No.	Subject	Period/Week			Examination			Total Marks	
		Th.	Pr.	Total	Marks (Th)	Hrs.	Marks (Pr)	Hrs.	
1.	Fabric Study.	3	4	7	50	2.5	50	2.5	100
2.	Basic Pattern Development.	3	4	7	50	2.5	50	2.5	100
3.	Garment Construction.	3	4	7	50	2.5	50	2.5	100

**CLASS–XI**  
**ELECTIVE**

**INTRODUCTION TO FASHION INDUSTRY (775)**

**Objective of the Course**

- ) To learn appropriate fashion terminology.
- ) To understand the fashion business.
- ) To gain knowledge of the working and interrelationships of different industries and services that comprise fashion business.
- ) To differentiate and appreciate the nuances of fashion terminology.
- ) To provide a comprehensive exposure to the structure and functioning of the global fashion industry.
- ) To introduce geographical and regional cultural variations in the global apparel and life style goods industry.

**Learning Outcome**

After finishing the course, the students shall be able.

- ) To use appropriate terminology used in fashion world.
- ) To understand the interrelationships in fashion business.
- ) To get the overview of different facets of Fashion Industry.

) To understand Fashion product categorization.

## **THEORY**

*Time: 2.5 Hours*

*Marks: 50*

### **Chapter–1: Introduction and Understanding of Fashion Technologies**

**12**

- 1.1 Fashion – An overview & Definitions in Different Aspects.
- 1.2 Fashion Categorization.
- 1.3 Fashion Dimensions.
- 1.4 Differentiation Between Style and Fashion.
- 1.5 Trend - Definitions and Origin.
- 1.6 Linkage and Difference Between Fashion, Design, Art and Craft.

### **Chapter–2: Raw Materials of the Fashion Industry**

**5**

- 2.1 Fiber.
- 2.2 Yarn Classification.
- 2.3 Fabric Development.
- 2.4 Dyeing.
- 2.5 Printing.
- 2.6 Finishing Processes.
- 2.7 Textile Industry – Today.
- 2.8 Transformation of Fabric into Garment.

### **Chapter–3: Aspects of Fashion Business**

**12**

- 3.1 Apparel Sectors – An overview.
- 3.2 Export House.
- 3.3 Retail House/Retailer.
- 3.4 Buying House and its Role.
- 3.5 Apparel Manufacturing – An Overview.
- 3.6 Understanding the Role of Fashion Professionals Design, Stylist and Merchandiser.

### **Chapter–4: Categories of Products in Fashion**

**6**

- 4.1 Introduction to the Fashion Industry.
- 4.2 Home Fashion Products.
- 4.3 Apparel Product Category.
- 4.4 Leather Product Category.

### **Chapter–5: Global Trade of Fashion Industry**

**11**

- 5.1 Glamour of Fashion – An Overview.
- 5.2 Influential Designers of the Early Twentieth Century.
- 5.3 Designers with Indelible Identity.
- 5.4 Designers in India.
- 5.5 Business of Fashion – An Overview.

- 5.6 Brands: India and Abroad.
- 5.7 Role of Media in Glamorizing Fashion.
- 5.8 Trade Show.

**Chapter-6: The Organizations and Associations in the Fashion Industry** **4**

- 6.1 Introduction to the Handloom and Handicraft Sector.
- 6.2 Non-Governmental Organization.
- 6.3 Government Organization.
- 6.4 The Textile Testing Laboratories.
- 6.5 Fashion Week Organizers.
- 6.6 Fashion Institutes and Colleges in India.

**PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

**Practical No. 1:** **3**

) To observe and appreciate the uniqueness of a craft.

**Practical No. 2:** **2**

) To observe, appreciate and explore the fashion trends demonstrated by surroundings in the current time.

**Practical No. 3:** **3**

) To observe and appreciate the classic silhouettes those have retained their identity through time.

**Practical No. 4:** **4**

) To creatively explore variations in forms and shapes from different mediums to generate prints from unusual inspirational sources.

**Practical No. 5:** **4**

) To creatively explore the patterns created by using dying process.

**Practical No. 6:** **4**

) To explore the print development through the surface structures of various products.

**Practical No. 7:** **4**

) To understand the stencil printing technique.

**Practical No. 8:** **2**

) To observe, appreciate and explore the fashion trends demonstrated by society in the current time.

**Practical No. 9:** **2**

) To observe, appreciate and explore the fashion trends demonstrated by Indian Consumer in Indian ethnic wear category.

**Practical No. 10:** **2**

) To observe and understand the effect of costumes in films on the society.

<b>Practical No. 11:</b>	<b>2</b>
) To observe, appreciate and explore the fashion trends demonstrated by Indian Consumer in menswear casual clothing.	
<b>Practical No. 12:</b>	<b>2</b>
) To observe and understand the product category in home fashion line.	
<b>Practical No. 13:</b>	<b>2</b>
) To observe and understand the product category in leather.	
<b>Practical No. 14:</b>	<b>2</b>
) To observe and appreciate the uniqueness of product detail created by listed designers.	
<b>Practical No. 15:</b>	<b>2</b>
) To introduce students to various national and international apparel brands.	
<b>Practical No. 16:</b>	<b>2</b>
) To introduce students to various national design and fashion institutes/colleges.	
<b>Practical No. 17:</b>	<b>2</b>
) To understand the design path followed by an established designer.	
<b>Practical No. 18:</b>	<b>2</b>
) To introduce students to various kids wear brands.	
<b>Practical No. 19:</b>	<b>2</b>
) To observe, appreciate and explore the fashion trends demonstrated by society in the current time.	
<b>Practical No. 20:</b>	<b>2</b>
) To introduce students to the roles played by an NGO in our society.	
<b>Recommended – Full day Practical</b>	
) Survey a Department of Lifestyle store and study the products on display. Make a presentation incorporating the following information – Range of products, clientele, price range, and visual display.	
) Visits to at least three support institutes and study of their working- report on the same.	
) Presentation on study on designer/design house/brand/store.	
<b>Methodology of Teaching</b>	
) Illustrated lectures with slides and visuals.	
) Presentations.	
) Market survey and research.	
<b>Evaluation Criteria</b>	
) Theory – Written Exam for 50 marks (2.5 hours).	
) Practical – 50 marks – 30 marks viva file with practical projects to be created with 10 marks internal and 10 marks external faculty.	

**Prescribed Reference Text**

- ) Introduction to Fashion Industry Handbook + Practical Manual, Class–XI, Published by CBSE.
- ) Concept to consumer - Gini Stephens Frings.
- ) Inside Fashion Business - Jeanette A. Jarrow, Miriam Guerrero, Beatrice Judelle.
- ) Fashion Kaleidoscope - Meher Castellino.
- ) Fashion accessories - Glenco McMillan/ Mc Graw.
- ) McDowell, Colin, Shoes- Fashion and Fantasy, Thames and Hudson.

**CLASS–XI  
ELECTIVE  
GARMENT CONSTRUCTION (776)**

**Objective of the Course**

- ) To introduce the students to garment making.
- ) To familiarize them with sewing machine & its parts.
- ) To familiarize them with use of other sewing aids.
- ) To teach them basic hand and machine stitches.
- ) To teach them simple machine operations.

**Learning Outcome**

After finishing the course, the students shall be able.

- ) To work proficiently on the sewing machine.
- ) To rectify simple problems of the machine.
- ) To stitch different seams on the machine.
- ) To finish edges with hand stitches.
- ) To make gathers, pleats and tucks on the fabric.

**THEORY**

*Time: 2.5 Hours*

*Marks: 50*

**Chapter–1:**

**10**

- ) Introduction to sewing machine, its various parts.
- ) Functions of various sewing machine parts.
- ) Types of sewing machines.

**Chapter–2:**

**5**

- ) Sewing aids.

**Chapter–3:**

**10**

- ) Maintenance of sewing machine.
- ) Understanding the simple problems of sewing machine and the solutions.

**Chapter–4:**

**10**



) Selection of suitable needle and thread for various fabrics and suitable stitch per inch (SPI).

## **Chapter-5:**

15

) Seams and Seam finishes.

## **PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

### **Practical No. 1:**

4

) Develop Proficiency in use of Sewing Machines.

### **Practical No. 2:**

4

) Stitching on Paper.

### **Practical No. 3:**

4

) Basic Stitching Skills.

### **Practical No. 4:**

4

) Develop Proficiency in Straight, Angular and Curved Seams.

### **Practical No. 5:**

4

) Basic Hand Stitches.

### **Practical No. 6:**

4

) Permanent Stitches.

### **Practical No. 7:**

4

) Basic Machine Seams.

### **Practical No. 8:**

4

) Fabric Manipulation: Darts.

### **Practical No. 9:**

5

) Fabric Manipulation: Tucks - Plain Tucks.

### **Practical No. 10:**

5

) Fabric Manipulation: Pleats.

### **Practical No. 11:**

4

) Fabric Manipulation Gathers.

### **Practical No. 12:**

4

) Fabric Manipulation: Shirring.

### **Methodology of Teaching**

) Illustrated lectures with slides, visuals and demonstrations wherever required.

### **Evaluation Criteria**

- ) Theory – Written Exam for 50 marks- 2.5 hour.
- ) Practical – 50 marks- Exam for 30 marks, File work to be marked 10 marks external and 5 marks internal faculty, 5 marks viva.

### **Prescribed Reference Text**

- ) Garment Construction Handbook & Practical Manual, Class XI, Published by CBSE.
- ) Encyclopedia of Dressmaking by Marshall Cavendish.
- ) Readers Digest book of Sewing.
- ) Encyclopedia of Sewing.

## **CLASS–XI OPTIONAL ELEMENTS OF DESIGN & FASHION (774)**

### **Objective of the Course**

- ) To introduce the students to the basic elements of design.
- ) To increase and build sensitivity to the forms around them.
- ) To develop and initialize a design vocabulary, an essential tool for practicing as designers.
- ) To introduce to the students the rudiments of sketching – perspective, shading, sizing etc.
- ) To introduce the students to the sketching of the human form.
- ) To introduce students to the basic elements of fashion.
- ) To teach students about movement of fashion, fashion cycle, categories of clothing etc.
- ) To sensitize students about different items of garments in each category i.e. menswear, womenswear and childrenswear.
- ) To teach students the difference between high fashion and mass fashion.
- ) To distinguish between custom made & ready to wear.

### **Learning Outcome**

After finishing the course, the students shall be able.

- ) Demonstrate elementary knowledge of elements of design/fashion, its origin and components.
- ) To use their developed ability to observe finer details around them.
- ) To develop basic design language.
- ) To understand the elements of fashion.
- ) To be aware of movement of fashion.
- ) To understand the fashion cycle.
- ) To know the various categories of menswear, womenswear and childrenswear.
- ) To understand the difference between hi-fashion & mass fashion and custom made & ready to wear.

## **THEORY**

**Time: 2.5 Hours**

**Marks: 50**

**Chapter–1: Introduction to Design** **10**

- ) Understand the concept of design.
- ) Elements of design.
- ) Principles of Design.
- ) Textures, Shapes & forms.
- ) Colour – theories etc.

**Chapter–2: History of Fashion** **15**

- ) Origin of Fashion.
- ) Theories of clothing – adornment, protection, identification and ritualistic.
- ) Concept of fashion.
  - (a) Body decoration, painting, scarification.
  - (b) Draping – Greco, Roman, Indian and other continents.
  - (c) Stitched garments- war uniforms, amours inspired.
  - (d) Comparison of western and oriental war uniforms.

**Chapter–3: History of Modern Clothing** **15**

- ) Influence of world wars on fashion.
- ) Influence of industrial revolution - custom made, mass produced.
- ) Automation and the various technical and scientific developments shaping the finest classless society in many centuries.
- ) Evolution of Indian fashion in the last century.

**Chapter–4: Fashion Market Dynamics** **10**

- ) Various categories of menswear, womenswear and childrenswear.
- ) Menswear – shirts, trousers, formal jackets suit and sporty suit.
- ) Womenswear – dresses, blouses, skirts, trousers, kameezes, saris, & blouses.
- ) Kids wear – categories of children for 0-15 years and various garments like frocks, skirts, blouses, trousers, dungarees, jackets etc.
- ) Age group relationship to design.

**PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

**Unit–1: Introduction to Design** **15**

- ) Colour wheel.
- ) Achromatic and monochromatic colour schemes.
- ) Textures.
- ) Placement of style-lines on a croquet.
- ) Fashion poses and properties.

**Unit–2: History of Fashion** **10**

- ) Identifying Zeitgeist.
- ) Influence of iconic personalities on fashion.
- ) Body adornments as identification.
- ) Draped garments.
- ) Museums as a source of knowledge.

### **Unit-3: Evolution of Modern Fashion**

**10**

- ) Impact of Industrial Revolution.
- ) Influence of war costumes on contemporary clothing.
- ) Identification of signature styles of designer.
- ) Historical costumes as inspiration for traditional Indian clothing.
- ) Movies as a source of historical reference costume.

### **Unit-4: Fashion Market Dynamics**

**15**

- ) Print media as source of trend information.
- ) Fashion Cycle.
- ) Field visit to understand trends.
- ) Pendulum Swing as a component of fashion forecasting.
- ) Art, Craft Design.

### **Methodology of Teaching**

- ) Illustrated lectures with slides and visuals.
- ) Demonstrations and individual feedback in practical.

### **Evaluation Criteria**

- ) Theory – Written Exam for 50 marks- 2.5 hour.
- ) Practical – 50 marks- Exam for 30 marks, File work to be marked 10 marks external and 5 marks internal faculty, 5 marks viva.

### **Prescribed Reference Text**

- ) Elements of Design and Fashion, Handbook & Practical Manual, Class–XI, Published by CBSE.
- ) 'Grafix' by Wolfganghageney.
- ) Repeat pattern - Peter Phillips, Gillian Bunce.
- ) Design Elements 2 - Richard Hora.
- ) Kaleidoscope of fashion, by Meher Castilino.
- ) Ancient Indian Costume, by Roshan Alkazi.
- ) Concept to Consumer, by Gini Stephens Frings.
- ) Encyclopedia of Fashion details.

**CLASS–XI**  
**GENERAL FOUNDATION COURSE (501)**

*Time: 3 Hours*

*Marks: 100*

**Part–I: (Compulsory to all Vocational Courses)**

*Marks: 50*

- A. Business Management and Entrepreneurship** **30**
- (a) **Entrepreneurship Orientation** **5**  
Importance and relevance in real life: Emphasis on self employment.
- (b) **Entrepreneurship Values and Attitudes** **5**  
Innovativeness, Independence, Risk Taking, Analytical ability.
- (c) **Entrepreneurial Motivation** **5**  
Achievement Planning, personal efficacy, entrepreneurial goal setting.
- (d) **Launching of a Business Venture** **15**  
Identification of project, steps in setting up a business, information about various institutions providing assistance, project formulation.
- B. Computational Skills** **10**
- (a) Percentage, ratio & proportion, profit & loss, discount, simple and compound interest, population growth and depreciation of value of articles using logarithm. **6**
- (b) Area and volume: rectangle, parallelogram, circle, cube, cone, cylinder & sphere. **4**
- C. Environmental Education** **5**
- (a) Environment and the society.
- (b) Environment properties risks in different economic enterprises, in use of raw materials, in processing / manufacturing and designing.
- (c) Poverty and environment.
- D. Rural Development** **5**
- (a) Agriculture, the back bone of Indian Economy.
- (b) Rural development projects in India including Integrated rural development programme.
- (c) Agro based rural industries.
- (d) Community approach to rural development.

**Part–II**

*Marks: 50*

- I. Study of traditional textiles of India, with special reference to their use in dress and costume. Study of designs (motifs and their arrangements), colours, fibre content, method of producing and the effect of history on the following textiles:
1. Embroidered Textiles of different parts of the country - Kashmir, Punjab, Himachal Pradesh, Rajasthan, Uttar Pradesh, Bihar, Bengal, Orissa, Gujrat and Karnataka. **15**
  2. Woven textiles. **10**  
Shawls of Kashmir, Jamdani and Baluchari of Bengal, Brocades of Banaras, Pathanis, Amru, Himru, Tancoi, Weaving in North Eastern States.
  3. Tie and Dye and Ikat Textiles. **5**  
Bhandhanis of Gujarat, Rajasthan and South India, Patolas of Gujarat, Ikat Fabrics of Orisssa and Andhra Pradesh, Mashru Fabrics.
  4. Printed and Painted Textiles. **10**  
Printed Textiles of Rajasthan (Sanganer and Bagru), printed and painted textiles of Andhra Pradesh Kalamkari, Pichhwaris and Mutano Pacchadi, printed textiles of Gujarat, Sanganeri prints, Ajrakh.

II. Visit to Museums and preparation of a catalogue of design of each of the special textiles.

10

**CLASS–XII**  
**ELECTIVE**  
**BASIC PATTERN DEVELOPMENT (775)**

**Objective of the Course**

- ) To introduce students to the world of fashion designing through pattern development.
- ) To explain important skill that enable the designer to convert a design sketch into a three dimensional form.
- ) To develop basic blocks for bodice, sleeve and Indian garments.
- ) To understand and implement the concept of test fits and to convert paper patterns into muslin.

**Learning Outcome**

After finishing the course, the students shall be able.

- ) To understand the basic skill of pattern making.
- ) To understand and appreciate the concept of fit and balance.
- ) To develop basic blocks from measurement charts.
- ) To test fit the pattern.
- ) To develop patterns for simple designs using basic blocks.

**THEORY**

*Time: 2.5 Hours*

*Marks: 50*

**Chapter–1: Introduction to Pattern Making**

10

- ) Understanding of body & its measurements.
- ) Methods of measuring body and dress form.

**Chapter–2: Methods of Measuring**

10

- ) Relationships of sizes and measurements.
- ) Measurement charts.

**Chapter–3: Tools and Terminology of Pattern Making**

5

- ) Tools of pattern making.
- ) Common terms used in pattern development.

**Chapter–4: Garment Details**

5

- ) Garment details – Neckline/collar/sleeve/pocket/placket.

**Chapter–5: Pattern Making of Indian Garment**

5

- ) Introduction to Indian Garments.

**Chapter–6: Pattern Development from Drapes and Measurement**

5

- ) Difference of pattern from drape and measurements.

**Chapter–7: Garment Fit**

10

) Introduction to Pattern Development for women wear - how patterns are made and developed, the importance of fit and balance and methods of achieving it.

## **PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

<b>Practical No. 1:</b>	<b>3</b>
) Basic Bodice.	
<b>Practical No. 2:</b>	<b>3</b>
) Dart Manipulation.	
<b>Practical No. 3:</b>	<b>4</b>
) Salwar.	
<b>Practical No. 4:</b>	<b>4</b>
) Churidar Pyjamas.	
<b>Practical No. 5:</b>	<b>4</b>
) Saree Blouse.	
<b>Practical No. 6:</b>	<b>3</b>
) Sleeveless Saree Blouse.	
<b>Practical No. 7:</b>	<b>3</b>
) Choli Blouse.	
<b>Practical No. 8:</b>	<b>3</b>
) Necklines.	
<b>Practical No. 9:</b>	<b>4</b>
) Kameez.	
<b>Practical No. 10:</b>	<b>3</b>
) A-line Kameez.	
<b>Practical No. 11:</b>	<b>4</b>
) Kalidar Kurta.	
<b>Practical No. 12:</b>	<b>4</b>
) Two Kali Kurta.	
<b>Practical No. 13:</b>	<b>4</b>
) Sleeve.	
<b>Practical No. 14:</b>	<b>4</b>
) Collar.	

## Final Product

Student will learn to develop patterns for Indian garments like salwar kameez, churidar-kalidar kurta, sari blouse and choli blouse also using basic blocks develop patterns for simple designs of skirts and blouses.

## Evaluation Criteria

- ) Theory – Written Exam for 50 marks- 2.5 hour paper.
- ) Practical – 50 marks- Exam for 30 marks, File work to be marked 5 marks external and 5 marks internal faculty, 10 marks viva.

## Prescribed Reference Text

- ) Basic Pattern Development, Students Handbook & Practical, Class XII, Published by CBSE.
- ) Essentials of Textile by Marjorie Joseph.

# CLASS–XII ELECTIVE GARMENT CONSTRUCTION (776)

## Objective of the Course

- ) To assemble a garment.
- ) To construct a bodice using different seams.
- ) To make a placket for bodice opening.
- ) To finish a neckline by both piping and facing and attaching a collar.
- ) To set in a sleeve in the arm hole and finish by attaching the cuff.
- ) To put gathers or pleats in the skirt and finish the waist with a waist band or attach a bodice.
- ) To stitch Indian garments using appropriate seams and finishes.

## Learning Outcome

After finishing the course, the students shall be able.

- ) To join various parts of the garment and construct a complete garment.
- ) To finish a bodice with neckline & Armhole using both piping and facing.
- ) To set in the sleeve.
- ) To stitch a skirt.
- ) To stitch a salwar.
- ) To stitch a Churidar.
- ) To stitch a kameez.
- ) To stitch a kalidar kurta.
- ) To stitch a sari blouse.
- ) To stitch a choli blouse.

## THEORY

*Time: 2.5 Hours*

*Marks: 50*

- ) Garment Assembly systems.

**20**



)	Garment finishing machines (button hole/button attach, bartack etc.	15
)	Fabric consumptions and estimations.	15

## **PRACTICAL**

**Time: 2.5 Hours**

**Marks: 50**

)	Concept of placket, various kind of plackets – continuous, diamond, shirt placket with facing, pleated shirt placket, blouse placket, kurta placket.	3
)	Concept of slit and seam.	3
)	Concept of collar and Collar attachment - peter pan, Chinese, shirt.	3
)	Pocket – Application of pocket, patch pocket, inserted pocket, structured pocket, bound pocket, welt pocket, inseam pockets etc.	3
)	Assembling of bodice.	4
)	Yoke attachment.	3
)	Sleeve attachment.	3
)	Waist band attachment.	3
)	Constructing a skirt and blouse using pattern template.	5
)	Constructing a salwar-kameez.	5
)	Constructing a Churidar-kalidar kurta.	5
)	Constructing a Sari blouse.	5
)	Constructing a choli blouse.	5

### **Methodology of Teaching**

- ) Illustrated lectures with slides, visuals and demonstrations where ever required.

### **Evaluation Criteria**

- ) Theory – Written Exam for 50 marks- 2.5 hour paper.
- ) Practical – 50 marks- Exam for 30 marks, File work to be marked 10 marks external and 10 marks internal faculty.

### **Prescribed Reference Text**

- ) Garment Construction, Handbook & Practical Manual, Class–XI & XII, Published by CBSE.
- ) Encyclopaedia of dressmaking by Marshall Cave.
- ) Readers Digest book of Sewing.
- ) Encyclopaedia of Sewing.

## **CLASS–XII OPTIONAL FABRIC STUDY (774)**

### **Objective of the Course**

- Ñ To acquire an elementary understanding of fibres.
- Ñ To understand yarns and fabric structures along with their end uses.

Ñ To develop understanding of basic techniques of value addition.

Ñ To learn appropriate surface design of fabrics.

### **Learning Outcome**

After finishing the course, the students shall be able.

Ñ To use appropriate terminology used in fabrics.

Ñ To understand the various techniques of fabric structure.

Ñ To appreciate the traditional textiles of India.

Ñ To be able to develop basic surfaces on textiles through embroideries and dyeing techniques.

## **THEORY**

*Time: 2.5 Hours*

*Marks: 50*

)	Introduction to fibre and yarn - definition, terminologies, properties, end users.	10
)	Fabric structures- woven, knitted, non wovens - definition, terminologies, properties.	10
)	End users of fabrics- Fabrics for apparel, home furnishing, special purposes.	5
)	Surface value addition on textiles- Embroidery techniques, printing, resist dyeing techniques- Tie and Dye, Batik, Block Printing, Stencil Printing.	10
)	Traditional textiles of India – Embroideries of states of India.	5
)	Traditional textiles of India – Resist dye techniques in traditional Indian textiles.	10

## **PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

<b>Practical No. 1:</b>		5
)	Fiber, Yarn and Fabric.	
<b>Practical No. 2:</b>		7
)	Basic Embroidery Stitches.	
<b>Practical No. 3:</b>		7
)	Tie and Dye.	
<b>Practical No. 4:</b>		7
)	Batik.	
<b>Practical No. 5:</b>		7
)	Block Printing.	
<b>Practical No. 6:</b>		7
)	Stencil Printing.	
<b>Practical No. 7:</b>		10
)	Indian Traditional Embroideries.	

## Methodology of Teaching

- ) Lectures, Practical, Demonstrations.
- ) Industry/field visits to craft centres, embroidery/tie-dye units.

## Evaluation Criteria

- ) Theory – Written Exam for 50 marks - 2.5 hour.
- ) Practical – 50 marks- Exam and documentation for 20 marks (2.5 hrs), File work to be marked 5 marks external and 5 marks internal faculty.

## Prescribed Reference Text

- ) Fabric Study, Students Handbook and Practical Manual, Class XII, Published by CBSE.
- ) 'Textiles' by Sara Kadolph & Anna Langford.
- ) Essentials of Textiles, by Marjorie Joseph.

# CLASS–XII GENERAL FOUNDATION COURSE (501)

*Time: 3 Hours*

*Marks: 100*

## Part–I: (Compulsory to all Vocational Courses)

*Marks: 50*

### **A. Business Management and Entrepreneurship** **30**

#### **Management of Business**

Elementary treatment/exposure to basic conceptual frame work of the topic listed below:

- (a)<sub>1</sub> Basic Function. **6**
- (b) Marketing Management. **6**
- (c) Financial Management. **6**
- (d) Production Management. **6**
- (e) Personnel Management. **6**

### **B. Computational Skills** **10**

- 1. (a) Solution of linear equations and their application to problem of commercial mathematics. **5**
- (b) System of linear equations and in equation in two variables. Applications in formation of simple linear programming problems.
- 2. Statistics: Raw data, bar charts and Histogram; Frequency Tables; Frequency Polygon; Ogive; Menu, Median and Mode of ungrouped and grouped data; Standard Deviation; Introduction to Mortality tables; Price Index etc. Introduction to Computers. **5**

### **C. Environmental Education & Rural Development** **10**

- 1. **Environmental Education** **5**
  - (a) Modernisation of agriculture and environment, irrigation, water logging, use of fertilisers, pesticides, soil erosion, land degradation (desertification and deforestation), silting and drying of water resources.
  - (b) Rational utilisation, conservation and regeneration of environmental resources (soil, air, water, plant, energy, minerals).
- 2. **Rural Development** **5**

Principles and goals of rural development, major problems/constraints in rural development in India.

**Part-II**

**Marks: 50**

1. Origin of clothing - theories of origin of clothing - protection, modesty and adornment. **5**
2. Study the costume of early civilisations - Egypt, Greek and Rome, their dress, hair-style, jewellery, cosmetics and accessories. **5**
3. Study the ancient Indian costume. **10**
  - ) Indus Valley civilisation and Vedic period.
  - ) Post Vedic period.
  - ) Mauryan and Sunga period.
  - ) Satavahana period.
  - ) Kushan period.
  - ) Gupta period.

With respect to dress including, royal, religious and military dress, headgear, hairstyle and jewellery, textiles and colours and the effect of important people and events.
4. Study the costume during medieval India. **10**
  - ) Sultanate.
  - ) Mughal period.
5. Study the modern Indian styles for dress. **10**
6. Visits to museums and art galleries and preparation of a catalogue of materials under study. **10**

**LIST OF EQUIPMENTS AND SOFTWARE**

**Lab Requirement for 30 Students**

	<b>Desirable</b>	<b>Minimum/Maximum</b>
<b>Batch Size</b>	<b>30</b>	<b>20/35</b>
Lab size -		35 ft x 20 ft.
<b>AC environment</b>	<b>Yes</b>	
Industrial sewing machines with power (costs at least Rs. 4,500 each)	30	One per student
Pattern Making tables (size 5 ft x 4 ft cork top)	8	4 students/table
Dress forms (half) (costs Rs. 8000 each)	30	one for 2 students
Steam irons @ Rs.1000	4	2
Ironing boards @ Rs. 500/-	4	2
Soft boards	All around the walls	2 in each lab/class
Stools	30	One per student
White board	1	1
Black board	1	1
<b>Approximate cost will be Rs. 5,00,000/-</b>		

### **Selection Criteria of School**

They should have ability to provide appropriate environment, well lit and ventilated space, equipment, machinery and maintenance, trained faculty, exclusive library for the course, willingness to upgrade facility and faculty.



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# TEXTILE DESIGN

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## CLASS–XI

1	2	3			4				5
S. No.	Subject	Period/Week			Examination				Total Marks
		Th.	Pr.	Total	Marks (Th.)	Hrs.	Marks (Pr.)	Hrs.	
1.	Element of Textile Design	4	3	7	50	2.5	50	2.5	100
2.	Textile Science	4	3	7	50	2.5	50	2.5	100
3.	Woven Textiles	3	4	7	50	2.5	50	2.5	100

## CLASS–XII

1	2	3			4				5
S. No.	Subject	Period/Week			Examination				Total Marks
		Th.	Pr.	Total	Marks (Th.)	Hrs.	Marks (Pr.)	Hrs.	
1.	Printed Textile	3	4	7	50	2.5	50	2.5	100
2.	Traditional Indian Textile	4	3	7	50	2.5	50	2.5	100
3.	Textile Chemical Processing	3	4	7	50	2.5	50	2.5	100

## CLASS–XI ELECTIVE

### ELEMENT OF TEXTILE DESIGN (777)

#### Objectives of Units

#### Introduction

Textile design involves a complete vision of development of new design aspects for novelty in fabric surface, textile products and various other textile materials. It includes designing of fabric used in clothing, house hold textiles, decorative textiles and others. It involves design intervention along with the development of the final product within the technical specification and right commercial value.

In order to create innovative surfaces and structures, “Elements of design” course is introduced as an elementary course. The course will provide an overview of Textile Design, Designer and Textile Industry. The overall objective of this course is to understand the basics of design in relation with textiles, textile design and related terminology and the overall work pattern of textile industry.

#### THEORY

*Time: 2.5 Hours*

*Marks: 50*

#### Unit–1: Introduction to Textile Industry

15

## Objectives

- ñ To understand the historical background of textiles.
- ñ To get an overview of the textile industry and related industries.
- ñ To get familiar with various textile materials and processes.
- ñ To gain knowledge about textile design as a field.
- ñ To understand the textile design as a profession and the role of Textile designers in Textile and Fashion Industry.
- ñ To understand the work structure, timing and planning in Textile industry.
- ñ To develop knowledge of forecast and market trends, its importance and need in Textile industry.

## Learning Outcome

After finishing the course students shall be able.

- ñ To understand the overview of Textile industry including history and current industry scenario.
- ñ To learn about the terminology associated with textile design material, process etc.
- ñ To understand the importance of market and trends and enhance observational skills.
- ñ To understand the Textile industry functional aspects and roles and responsibilities of a designer.

## Course Content

- ñ An Overview of Textiles, history and industrial background.
- ñ Textile designer role responsibilities.
- ñ Textile material and process.
- ñ Textile industry work structure, time and planning.
- ñ Importance of market trend and forecast.

## Teaching Methodology

- ñ Class lectures and Practical demonstrations.
- ñ Class-room quiz.
- ñ Presentations and Discussions in class.
- ñ Review and Feedback on assignments.
- ñ Market visit, Survey and Field visits to relevant Textile Manufacturing unit, museums etc.

## Evaluation Criteria

- ñ Written theory test: knowledge and understanding.
- ñ Discussion and quiz: understanding.

## Unit–2: The Primary Components of Textile Design

7

### Objectives

The main objective of this unit is to develop an understanding of the primary components of textile design, and the related process. The basic of textile design knowledge is essential and useful for further application in various sectors of textile design.

- ñ To develop an understanding for the components of textile design, and the related process.
- ñ To introduce the students to the basic principle and elements of design.

- Ñ To develop interesting compositions using forms and colour.
- Ñ To develop sensitivity among the students for better understanding of forms and its application for creating visual images of great value.

### **Learning Outcome**

After finishing the course students shall be able.

- Ñ To understand the application of design elements and principles for textile designing.
- Ñ To get familiar with the design process and to make design ideas using innovative material and techniques.
- Ñ To enable students to work on various design compositions.

### **Course Content**

- Ñ Elements of design.
- ) Principles of design.

### **Teaching Methodology**

- Ñ Class lectures and practical demonstrations.
- Ñ Class-room assignments to create designs for specific textile product. Display, presentations and discussions in class.
- Ñ Review and feedback on assignments.
- Ñ Market visit, survey.
- Ñ Visits to design houses (if possible).
- Ñ Special lectures and presentations by textile professionals.

### **Evaluation Criteria**

- Ñ Written theory test: knowledge and understanding.
- Ñ Practical assignments: application and skills.
- Ñ Design assignments: innovation in design ideas, creativity and functionality.
- Ñ Display and presentation: neatness and visual impact.

## **Unit-3: Textile Design Development**

**6**

### **Objectives**

The main objective of this unit is to develop an understanding of the components of textile design through a complete process for creation of textile design patterns, repeats, various layouts, use of colors, creation of color ways for generating variety and the inspiration of design.

- Ñ To develop an understanding for the components of textile design, and the related process.
- Ñ To enable the students to utilize the principals and elements of design in application of textile design development.
- Ñ To develop interesting compositions using forms and colour.
- Ñ To develop sensitivity among the students for a wholesome understanding of the textile design process.
- Ñ Developing sensitivity to take various inspirations for development of design.

### **Learning Outcome**



After finishing the course students shall be able.

- Ñ To understand the application of design elements and principles for textile designing.
- Ñ To get familiar with the design process and to make design ideas using innovative material and techniques.
- Ñ To enable students to work on various design compositions, repeats, layouts and color ways.

### **Course Content**

1. Elements of textile design such as repeats, layouts and colour ways.
2. Inspiration for design and design process.

### **Teaching Methodology**

- Ñ Class lectures and practical demonstrations.
- Ñ Class-room assignments to create designs for specific textile product.
- Ñ Display, presentations and discussions in class.
- Ñ Review and feedback on assignments.
- Ñ Market visit, Survey and field visits to Textile stores.
- Ñ Visits to design houses (if possible).
- Ñ Special lectures and presentations by textile professionals.

### **Evaluation Criteria**

- Ñ Written theory test: understanding.
- Ñ Practical assignments: application and skills.
- Ñ Design assignments: innovation in design ideas, creativity and functionality.
- Ñ Display and presentation: neatness and visual impact.

## **Unit-4: Design for Various Types of Textile**

22

### **Objectives**

The main objective of this unit is to get an overview of the various types of textiles available in industry. It includes study of knits, woven, printed, embellished and resist textiles. This unit diversifies textiles through explaining various techniques and technology in textiles. The aim is also to understand the professional aspects of the work standards and methods existing in textile industry at present.

- Ñ To develop an understanding for the variety available in textiles.
- Ñ To enable the students to gain the knowledge of various techniques and methods of creating various types of textiles.
- Ñ To develop understanding of textile terminology.
- Ñ To develop understanding of professional aspects of the work practices existing in textile industry in current scenario.
- Ñ Developing textile technique skills through practical application.
- Ñ Developing communication skills and ability to use right terminology for an effective Design presentation.

### **Learning Outcome**

After finishing the course students shall be able.

- Ñ To understand the application of various techniques available in textile industry.

- Ñ To be able to differentiate among various textiles by looking at technique of making and design aspects.
- Ñ To enable students to realize professional aspects of the work standards in textile industry at present.
- Ñ To be able to make an effective design presentation.

### **Course Content**

1. Types of various available Textiles by techniques.
2. Presentation of Design and Professional Practices.

### **Teaching Methodology**

- Ñ Class lectures and practical demonstrations.
- Ñ Class-room assignments to create designs for specific textile product using specific techniques.
- Ñ Display, presentations and discussions in class.
- Ñ Review and feedback on assignments.
- Ñ Market visit, Survey and field visits to nearby Textile manufacturing units.
- Ñ Visits to design houses (if possible).
- Ñ Special lectures and presentations by textile professionals.

### **Evaluation Criteria**

- Ñ Written theory test: understanding.
- Ñ Practical assignments: application and skills.
- Ñ Design assignments: innovation in design ideas, creativity and functionality.
- Ñ Display and presentation: neatness and visual impact.

## **PRACTICAL**

***Time: 2.5 Hours***

***Marks: 50***

<b>Practical No. 1:</b>	<b>5</b>
) Understanding textiles from various perspectives.	
<b>Practical No. 2:</b>	<b>5</b>
) To understand textile design profession, role and responsibilities of textile designer.	
<b>Practical No. 3:</b>	<b>5</b>
) To understand basic language of design and the important terms associated with it.	
<b>Practical No. 4:</b>	<b>5</b>
) Practical application of elements of design in textile design.	
<b>Practical No. 5:</b>	<b>5</b>
) To understand woven fabric, the type of woven fabrics available as per the technique of weaving.	
<b>Practical No. 6:</b>	<b>5</b>
) To introduce knitted fabrics.	
<b>Practical No. 7:</b>	<b>5</b>

) To understand design terminologies related to printed textiles.

**Practical No. 8:**

5

) To learn various methods of resisting the fabric and its application in textile design.

**Practical No. 9:**

5

) To develop understanding for various types of embellishment techniques on textiles.

**Practical No. 10:**

5

) To understand the Textile designers professional practices.

**Prescribed Reference Text**

) Elements of Textile Design, Student Handbook & Practical Manual, Published by CBSE.

) Watsons Textile Design and Colour - I-Z Grosiki, Universal Publishing, Bombay.

) International Textile Design - Mary Schoeser, John Wiley and Sons Inc. 1985.

**CLASS–XI**  
**WOVEN TEXTILE (778)**  
**(ANYONE FROM WOVEN TEXTILE OR TEXTILE SCIENCE)**

**Preamble**

) To Introduce weaving and weaving terminologies.

) To familiarize students to weaving technology, looms category and the preparatory processes.

) To gain an overview of the various woven structures.

) To introduce scope of Woven design industry.

**THEORY**

*Time: 2.5 Hours*

*Marks: 50*

**Unit–1: Introduction of Woven Textiles**

**10**

**Objective**

) The unit deals with all the important definitions of woven textiles and various associated terminologies.

) To sensitize students towards fabric classification and different fiber types.

) Introduction of looms and its parts.

**Course Content**

1. Introduction to Textiles

(a) Introduction to textiles and various terminologies.

(b) The classification of textiles in terms of Woven and Non-Woven on the basis of fiber / yarn types.

2. Introduction to Weaving

(a) Understand weaving, its history in terms of traditional weaving and the impact of Industrial Revolution.

3. Looms

- (a) What is a loom.
- (b) Its classifications on the basis of shuttle and shuttle less looms, power loom, handloom, tappet, jacquard and dobby.

### Learning Outcome

At the end of the unit the student shall be able.

- ) To differentiate types of woven fabrics.
- ) To understand weaving technology.
- ) To classify and identify various looms.

### Teaching Methodology

- ) Illustrated lectures with power point presentations.
- ) The teacher shall plan a visit to a weaving unit of a composite textile mill.
- ) The teacher would be expected to create a library of fabrics to explain.

### Assignment

- ) **Preparation of Fabric swatch book:** 10 sourced fabric swatches (8"x8") of woven, knitted and fused fabrics. The swatches should be made of different fiber and yarns.
- ) **Group Assignment:** Presentation by a group of 5-6 students. The group shall make a presentation on one type of Loom.

### Evaluation Criteria

- ) Selection of swatches, identification, classification and presentation as a swatch book.
- ) Presentation – verbal presentation, visual presentation, understanding of the topic, group management.
- ) Quality of work submitted.
- ) Viva- voice for swatch book and presentation.

## Unit-2: Weaving Technology

15

### Objective

- ) The unit will introduce the students to various loom mechanisms and weaving terminologies.
- ) Looms classifications and loom parts.
- ) To introduce yarn preparatory - an important prerequisite for weaving.

### Course Content

1. Weaving Mechanism.
  - (a) Complete loom details – its parts, motions and other terminologies associated with weaving.
2. Loom Preparatory.
  - (a) Processes involved in preparation of loom for weaving – winding, warping, weft preparatory and denting.
3. Weaving terminologies.
  - (a) Ends / Warp.
  - (b) Picks / Weft.
  - (c) Selvedge.
  - (d) Fabric Construction – Ends / Inch and Picks / Inch.

- (e) Reed Count and warping calculations.
- 4. Introduction to Weave Design.
  - (a) Usage of Point Paper/Graph Paper/Design Paper.
  - (b) Methodology of Interlacement of Warp and Weft.
  - (c) Construction of Fabric.
  - (d) Design, draft and peg plan preparation.
  - (e) Different types of draft plan.

### **Learning Outcome**

At the end of the unit the students shall know.

- ) Complete details about Looms and its parts.
- ) The preparatory procedures for weaving.
- ) The process involved in preparing design, draft and peg plan.

### **Teaching Methodology**

- ) Illustrated lectures with Power Point presentations.
- ) Visit to a composite textile mill – Preparatory Unit.

### **Assignment**

- ) Setting up of loom – the student will individually set up a loom- three meters of warp, for eight inch wide swatches.

### **Evaluation Criteria**

- ) Daily assessment on presentation of work.
- ) Level of improvement if required.
- ) Punctuality, regularity and sincerity.
- ) Quality of loom setup.

## **Unit-3: Fabric Structure**

15

### **Objective**

- ) To introduce fabric structures and design development.
- ) To develop plain, twill and sateen weave structure using point paper.

### **Course Content**

1. Introduction to Plain Weave.
  - (a) Characteristics of Plain Weave.
  - (b) Ornamentation of Plain Weave.
  - (c) Derivatives of Plain Weave.
2. Introduction to Twill Weave.
3. Characteristics of Twill Weave.
  - (a) Derivatives of Twill Weave.
4. Introduction to Satin Weave.
  - (a) Characteristics of Sateen.

- (b) Irregular Satin/Sateen.

### **Learning Outcome**

At the end of the unit the students shall know.

- ) The three basic fabric structures.
- ) How to draw the structures on design paper.
- ) How to prepare design, draft and peg plan.

### **Teaching Methodology**

- ) Illustrated lectures with Power Point Presentations.
- ) The teacher would be expected to create a library of fabrics to explain and conduct the class.
- ) The swatches should be collected in terms of the different designs – stripes, checks, textures and other related designs which can be developed using these three weave structures.

### **Assignment**

- ) Weaving practical – to weave 3 swatches of 8”x8” of plain, twill and sateen weave.
- ) Preparation of document of the woven swatches.

### **Evaluation Criterion**

1. Quality of weaving.
2. Quality of documentation.
3. Regularity and sincerity.

## **Unit-4: Woven Fabric and End Uses**

10

### **Objective**

- ) To introduce the students to the commercial aspect of the woven textiles.
- ) This unit will introduce the students to woven structures and usage of computer for making the designs.

### **Course Content**

- ) Woven Structures and development of woven design on Computer.
- ) Overview of the Textile industry.

### **Learning Outcome**

At the end of the unit, the students shall be able.

- ) To identify Fabric types and product categories.
- ) To identify fabric as per end use.
- ) To develop design on computer.

### **Teaching Methodology**

- ) Illustrated lectures with Power Point Presentations.

### **Assignment**

- ) **Preparation of Fabric swatch book** – 10 fabrics swatches (8”x8”) of plain, twill and sateen. The swatches should be of different types in terms of design patterns.

- ) **Suggestive** – 1-2 swatches could be “NEW DESIGN” as identified by the students.

### **Evaluation Criteria**

- ) Selection of swatches.
- ) Identification and classification of Fabrics.
- ) Presentation as a swatch book.

## **PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

### **Unit-1:**

- ) **Assignment No.1:** To understand the different materials (Fiber Types) used to make a fabric and study its characteristics. 2
- ) **Assignment No.2:** To study and understand the different types of looms. 2

### **Unit-2:**

- ) **Assignment No. 3:** To understand working of a textile unit as studied in the textbook. 2
- ) **Assignment No. 4:** To gain knowledge and visualize the effect of interlacing of material. 2
- ) **Assignment No. 5:** Set up the loom to be used for weaving in the next assignments. 3

### **Unit-3:**

#### **Part A**

- ) **Assignment No. 6:** Use graph paper to draw plain weave with drafting and peg plan. 4
- ) **Assignment No. 7:** Draw 5 regular or irregular Mat weaves/Warp Ribs/ Weft Ribs with drafting and peg plan. 4
- ) **Assignment No. 8:** Draw 5 Balanced/ 5 Un balanced/ "S" Twill/ 5 "Z" Twill with drafting and peg plan. 4
- ) **Assignment No. 9:** Draw 5 regular and irregular sateen weave/ satin weave with drafting and peg plan. 4

#### **Part B**

- ) **Assignment No. 10:** Sample weaving - Plain Weave. 4
- ) **Assignment No. 11:** Sample weaving - Mat Weave. 4
- ) **Assignment No. 12:** Sample weaving - Rib Weave. 4
- ) **Assignment No. 13:** Sample weaving - Twill Weave. 4
- ) **Assignment No. 14:** Sample weaving - Sateen Weave. 4
- ) **Assignment No. 15:** To study the different variety of fabric as available by their commercial names. 3

### **Reference Material**

- ) Woven Textile (Handbook and Practical Manual), Class–XI, Published by CBSE.
- ) Principles of Weaving - R. Marks, A. T. C. Robinson.
- ) The Four-Shaft Table Loom - Anne Field, Dryad Press Ltd. London 1987.
- ) The Ashford Book of Weaving - Anne Field, B. T. Batsford, London, 1992.
- ) Warp & Weft - A Dictionary of Textile Terms - Dorothy K. Burnham, Charles Seribner's Son, New York, 1981.

- ) Textile Terms and Definitions - The Textile Institution, Manchester U.K., The Textile Institution, Manchester U.K. 1993.
- ) International Textile Design - Mary Schoeser, John Wiley & Sons, Inc 1995.
- ) The New Textile, Trends & Traditions - Chloe Colchester, Thames & Hudson, 1997.

**CLASS–XI**  
**TEXTILE SCIENCE (779)**  
**(ANYONE FROM WOVEN TEXTILE OR TEXTILE SCIENCE)**

**Preamble**

Since clothing and home furnishings make up a major portion of the family budget, knowledge of textiles is as appropriate for consumers who wish to purchase wisely as it is for those whose career interests lie in textiles. The marketers of textile fibers, fabrics, and finished goods must all be familiar with the manufacturing methods, construction, and finishing techniques which affect the performance of textile products.

The objective of this course is to understand the raw materials - fibers, fiber source and properties. The conversion of fiber into yarn, yarn spinning processes conversion of yarn for fabric developments (like woven, knit and other forms of fabrics). At the end of the course the students shall be able to understand integration of fiber, yarn and various forms of fabrics and will be able to integrate fabric properties, characteristics, performances and behavior according to various end uses for Apparel and Home furnishing products.

**THEORY**

*Time: 2.5 Hours*

*Marks: 50*

**Unit–1: Overview of Textile Industries and Textile Fibers**

**10**

**Objectives**

- ) To familiarize the background of Indian Textile Industries.
- ) To learn and understand Textile terminology.
- ) To understand the sources and properties of Textile fibers.
- ) To predict the performances and characteristics of fabrics, according to fiber content for various end uses.

**Learning Outcome**

After finishing the course, the students shall be able.

- ) To use appropriate terminology used in Textile Application.
- ) To understand the interrelationships in Textile Business.
- ) To get an overview of Textile Industries in India.

**Course Content**

- ) The major Textile Production Segments in India.
- ) Sources of Fabrics.
- ) Classification of Textile Fibers according to origin and chemical composition; Essential Properties and Performances of Textile Materials like Aesthetic, Durability, Comfort, Safety, Care and Maintenance Properties.



- J Properties of Cotton, Flax, Hemp and Jute.
- J Properties of Silk, Wool, Mohair and other Natural Fibers.
- J Properties of Viscose Rayon, Loyocel and Acetate.
- J Properties of Polyester, Nylon, Acrylic and Spandex.

## **Unit-2: Textile Spinning and Yarn**

**20**

### **Objectives**

- J To familiarize Yarn Spinning Process.
- J To understand the properties and characteristics of various types of yarns.

### **Learning Outcome**

After finishing the course, the students shall be able.

- J To understand basics of Yarn Manufacturing.
- J To predict and select different types of yarn for fabric development according to various end uses.

### **Course Content**

- J Classification of Yarns; Spun Yarn Production Process, Carded and Combed Yarns; Woollen and Worsted Yarns; Mono Filament and Multi Filament Yarns.
- J Yarn Numbering Systems – Cotton Count, Metric Count, Denier, Tex and Deci-Tex. Single and Plied Yarns; Yarn Twist, Amount of Twist and Direction of Twist.
- J Textured Yarns – Core Spun Yarn; Novelty and Fancy Yarns, Blended Yarns, Sewing Threads.

## **Unit-3: Textile Weaving and Woven Fabrics**

**10**

### **Objectives**

- J To familiarize the weaving process involved in producing Woven Fabrics.
- J To understand the properties and characteristics of various types of Woven Fabrics.

### **Learning Outcome**

- J To predict and select different types of woven fabrics according to various end uses.
- J To recognize and identify different types of woven fabrics.

### **Course Content**

- J Preparatory to weaving, including High speed machines for Winding, Warping, Sizing, Beaming and Weft Winding.
- J The Loom, types of Looms, classification and selvedge formations.
- J Basic motions of the loom, including the application of Dobby and Jacquards. Non-automatic loom, Automatic loom, Shuttle less weaving machines, Terry looms and Drop box loom.
- J Introduction to basic weaves; plain, basket, rib, twill, satin, sateen, dobby, jacquard, crepe, pique, seer sucker, terry, velvet and velveteen.

## **Unit-4: Other Forms of Textiles**

**10**

### **Objectives**

- ) To familiarize the basics of different types of Knitting and properties of knitted fabrics, and other forms of Textiles like Non-woven, Felt, Lace and Braids.

### Learning Outcome

- ) To predict and select different types of Knitted, Non-woven, Felt, and Braid according to various end uses.
- ) To recognize and identify different types : Knitted, Non-woven, Felt, and Braid fabrics.

### Course Content

- ) Difference between Woven and Knitted fabrics.
- ) General knitting terms : types of knitting machines, circular and flat machines.
- ) Types of Knitting Stitches.
- ) Properties of Weft Knitted Fabrics, Jersey, Rib, Purl and Interlock.
- ) Comparison and properties of Warp Knitted Fabrics.
- ) Non-Woven Fabrics – Methods and Materials to Manufacture Non-Woven Fabrics, Felt, Embroidery, Tufted Fabrics, Braids and other Narrow Fabrics.

### Methodology of Teaching

- ) Illustrated lectures with slides and visuals along with fibers, yarns, woven, knitted non-woven, lace and braid fabric samples.
- ) A teacher would be expected to create a library of fabrics to explain and conduct the classes.
- ) Visit to textile mills & Industry.

## PRACTICAL

*Time: 2.5 Hours*

*Marks: 50*

- |  |          |
|--|----------|
| <b>Experiment No. 1:</b>   | <b>3</b> |
| ) To determine the chemical nature of fiber by burning test.                                   |          |
| <b>Experiment No. 2:</b>   | <b>3</b> |
| ) To determine the variation in staple lengths of natural fibers.                              |          |
| <b>Experiment No. 3:</b>   | <b>3</b> |
| ) To determine the yarn fineness using direct count system.                                    |          |
| <b>Experiment No. 4:</b>   | <b>3</b> |
| ) To determine the yarn fineness using English count system (indirect).                        |          |
| <b>Experiment No. 5:</b>   | <b>2</b> |
| ) To convert yarn fineness from direct count system into indirect count system and vice versa. |          |
| <b>Experiment No. 6:</b>   | <b>3</b> |
| ) To determine the twist direction in yarn.  |          |

<b>Experiment No. 7:</b>	<b>3</b>
) To determine the twist per unit length of a yarn.	
<b>Experiment No. 8:</b>	<b>2</b>
) To determine the difference between a staple fiber yarn and a filament yarn.	
<b>Experiment No. 9:</b>	<b>2</b>
) To differentiate between a single staple fiber yarn and a plied staple fiber yarn.	
<b>Experiment No. 10:</b>	<b>2</b>
) To determine the sequence of process and material flow in yarn manufacturing.	
<b>Experiment No. 11:</b>	<b>2</b>
) To measure the thread density in different kind of fabrics and compare according to end uses.	
<b>Experiment No. 12:</b>	<b>2</b>
) To identify the possible end-uses of woven, knitted and non-woven fabrics.	
<b>Experiment No. 13:</b>	<b>3</b>
) To measure grams per square meter (GSM) of different quality of fabrics and compare the weight according to end uses.	
<b>Experiment No. 14:</b>	<b>2</b>
) To analyze the design of different fabric samples.	
<b>Experiment No. 15:</b>	<b>2</b>
) To visit a fabric store or fabric department within a store and survey the various woven fabrics on display and note the wide variety of fabrics and possible end uses.	
<b>Experiment No. 16:</b>	<b>3</b>
) To find the fabric thickness of different fabrics.	
<b>Experiment No. 17:</b>	<b>3</b>
) To evaluate the wale and course per inch with the help of a pick glass.	
<b>Experiment No. 18:</b>	<b>2</b>
) To source fifteen different nonwoven fabrics from the market physically evaluate their possible end-uses.	
<b>Experiment No. 19:</b>	<b>3</b>
) To prepare a flow chart for weaving or knitting process in the industry.	
<b>Experiment No. 20:</b>	<b>2</b>
) To estimate the drape of various fabrics.	

### Reference Books

    ) Textile Science, Students Handbook & Practical Manual, Class–XI, Published by CBSE.

- ) Textiles, Fiber to Fabric, Corbman.
- ) Textiles by Sara Kadolph & Anna Langford.

## CLASS–XI

### GENERAL FOUNDATION COURSE (501)

*Time: 3 Hours*

*Marks: 100*

#### Part–I: (Compulsory to all Vocational Courses)

*Marks: 50*

- |           |  |           |
|-----------|--|-----------|
| <b>A.</b> | <b>Business Management and Entrepreneurship</b>  | <b>30</b> |
| (a)       | <b>Entrepreneurship Orientation</b><br>Importance and relevance in real life: Emphasis on self employment.   | 5         |
| (b)       | <b>Entrepreneurship Values and Attitudes</b><br>Innovativeness, Independence, Risk Taking, Analytical ability.   | 5         |
| (c)       | <b>Entrepreneurial Motivation</b><br>Achievement Planning, personal efficacy, entrepreneurial goal setting.  | 5         |
| (d)       | <b>Launching of a Business Venture</b><br>Identification of project, steps in setting up a business, information about various institutions providing assistance, project formulation. | 15        |
| <b>B.</b> | <b>Computational Skills</b>  | <b>10</b> |
| (a)       | Percentage, ratio & proportion, profit & loss, discount, simple and compound interest, population growth and depreciation of value of articles using logarithm.                        | 6         |
| (b)       | Area and volume: rectangle, parallelogram, circle, cube, cone, cylinder & sphere.  | 4         |
| <b>C.</b> | <b>Environmental Education</b>   | <b>5</b>  |
| (a)       | Environment and the society.   |           |
| (b)       | Environment properties risks in different economic enterprises, in use of raw materials, in processing / manufacturing and designing.  |           |
| (c)       | Poverty and environment.   |           |
| <b>D.</b> | <b>Rural Development</b>   | <b>5</b>  |
| (a)       | Agriculture, the back bone of Indian Economy.  |           |
| (b)       | Rural development projects in India including Integrated rural development programme.  |           |
| (c)       | Agro based rural industries.   |           |
| (d)       | Community approach to rural development.   |           |

#### Part–II

*Marks: 50*

- |      |   |    |
|------|---|----|
| I.   | Origin of early Textile fibers and development of:  | 10 |
| )    | Cotton in India.  |    |
| )    | Silk in China.  |    |
| )    | Linen in Egypt.   |    |
| II.  | Historical background and study of the characteristics of traditional Indian Textiles.  | 5  |
| III. | Traditional Embroidered Textiles of India study with respect to their Historical Development, techniques, stitches, fabrics, colours and symbolism: | 30 |
| )    | Kasuti of Karnataka.  |    |

- ) Kantha of Bengal.
- ) Phulkari of Punjab.
- ) Embroideries of Kashmir: Kashida, Zalakdozi, Zardozi.
- ) Gujarat Embroideries.
- ) Chamber Rumal of Himachal.
- ) Chikankari of U.P.
- ) Applique of Orrisa.
- ) Banjara Embroideries of Andhra Pradesh.
- ) Embroideries of Rajasthan and
- ) Sujini and applique of Bihar.

IV. Catalogue of the designs collected from various sources depicting the embroidered art of India.

5

## CLASS–XII ELECTIVE TRADITIONAL INDIAN TEXTILE (777)

### Preamble

India boasts of a rich textile and craft heritage. These traditions not only give meaning to the existence of India's people, but also provide domestic, social and religious framework. Hence textile crafts serve a dual role as they signify cultural values and at the same time is an important source of livelihoods for economically challenged marginalized sections of the society. Crafts including weaving are the second largest employer after agriculture in India and provide livelihood to over 200 million artisans.

The course on 'Traditional Indian Textiles' will initiate students to the world of textile crafts of India, through an appreciation of its unfolding through the ages in order to make them understand finer nuances of painted, printed & woven traditional textiles crafts.

### THEORY + PRACTICAL

*Time: 2.5 Hours+2.5 Hours*

*Theory: 50 Marks + Practical: 50 Marks*

#### Unit–1: Embroidered Textiles

10+10

#### Objectives of the Unit

- ) To introduce the technique of embroidery for value-addition.
- ) To create awareness about the different embroidered textiles of India.
- ) To initiate identification of regional embroideries developed by various communities.
- ) To understand the origin of technique and design with reference to colours, motifs, layouts of different embroidered textiles.
- ) To learn about the evolution of embroidered textiles over a period of time.

#### Learning Outcomes

After completing the unit, the students shall be able to.

- ) Appreciate the finer nuances of embroideries.

- )] Classify the regional embroideries of India.
- )] Identify a specific embroidery style of India on the basis of colours, motifs and layout.
- )] Identify the influencing factors for development and evolution of a specific embroidered textile.

### Course Content

- )] Introduction to traditional embroidered textiles from different regions of India.
- )] Categorization of embroidery styles on the basis of region:
  - (a) North India:
    - (i) Kashida from Kashmir.
    - (ii) Phulkari from Punjab.
    - (iii) ChambaRumal from Himachal Pradesh.
  - (b) Western India:
    - (i) Embroidery from Gujarat.
    - (ii) Parsi embroidery.
  - (c) Central India:
    - (i) Chikankari from Uttar Pradesh.
    - (ii) Patti kaKaam from Uttar Pradesh.
    - (iii) Zardozi from Uttar Pradesh.
  - (d) Southern India:
    - (i) Kasuti from Karnataka.
    - (ii) Lambadi embroidery from Andhra Pradesh.
  - (e) Eastern India:
    - (i) Kantha from West Bengal.
    - (ii) Sujani from Bihar, Pipli appliqué from Orissa.
- )] Study of the above mentioned regional embroideries with reference to origin, technique, raw material, colours, motifs and layout.
- )] Overview of the historic embroidered textiles and the contemporary scenario.

### Methodology of Teaching

- )] Illustrated lectures.
- )] Visit to local museums/Haats/exhibitions of craft based products.

### References

- )] Traditional Indian Textiles, Students Handbook & Practical Manual, Published by CBSE.
- )] Barnard, Nicholas & Gillow, John (1991), Traditional Indian Textiles (Thames & Hudson Ltd.: London).
- )] Naik, Shailaja D (1996), Traditional Embroideries of India (APH Publishing Corporation: New Delhi).

## Unit–2: Resist Dyed Textiles

15+15

### Objectives of the Unit

- ) To introduce the technique of resist dyeing for value-addition.
- ) To create awareness about the different resist dyed textiles of India.
- ) To initiate differentiation between yarn resist dyed (Ikat) and cloth resist dyed textiles (Bandhej).
- ) To understand the origin of technique and design with reference to resist dyed textiles.
- ) To learn about the evolution of resist dyeing over a period of time.

### Learning Outcomes

After completing the unit, the students shall be able to.

- ) Understand the finer nuances of resist dyed textiles.
- ) Classify the regional tie-dyed textiles of India.
- ) Identify specific ikat textiles of India on the basis of technique, colours, patterns and layout.
- ) Identify specific tie-dyed textiles of India on the basis of technique, colours, patterns and layout.
- ) Identify the influencing factors for development and evolution of a specific resist-dyed textile.

### Course Content

- ) Introduction to traditional resist-dyed textiles from different regions of India.
- ) Categorisation of ikat styles on the basis of region:
  - (a) Patola from Gujarat.
  - (b) Bandhas from Odisha.
  - (c) Pochampalli & TeliaRumal from Andhra Pradesh.
- ) Categorisation of tie-dyed textiles on the basis of region:
  - (a) Bandhani from Gujarat.
  - (b) Bandhej & Leheriya from Rajasthan.
- ) Study of the above mentioned resist-dyed textiles with reference to origin, technique, raw material, colours, patterns and layout.
- ) Overview of the historic resist-dyed textiles and the contemporary scenario.

### Methodology of Teaching

- ) Illustrated lectures.
- ) Visit to local museums/haats/exhibitions of craft based products.

### References

- ) Traditional Indian Textiles, Students Handbook & Practical Manual, Published by CBSE.
- ) Barnard, Nicholas & Gillow, John (1991), Traditional Indian Textiles (Thames & Hudson Ltd.: London).
- ) Dhamija, Jasleen & Sarabhai, Mrinalini (1988), Patolas & Resist Dyed Fabrics of India, (Mapin Publishers: Ahmedabad).

## Unit-3: Printed Textiles

### Objectives of the Unit

- )] To introduce the technique of hand block printing for value-addition.
- )] To create awareness about the different printed textiles of India.
- )] To initiate differentiation between direct and resist style of printing.
- )] To understand the origin of technique and design with reference to block printed textiles.
- )] To learn about the evolution of block printing over a period of time.

### **Learning Outcomes**

After completing the unit, the students shall be able to.

- )] Understand the finer nuances of block printed textiles.
- )] Classify the regional block printed textiles of India.
- )] Identify specific block printed textiles of India on the basis of technique, colours, motifs and layout.
- )] Identify the influencing factors for development and evolution of a specific block printed textile.

### **Course Content**

- )] Introduction to traditional block printed textiles from different regions of India.
- )] Categorization of block printing styles on the basis of region:
  - (a) Bagru prints from Rajasthan.
  - (b) Sanganer prints from Rajasthan.
  - (c) Kalamkari from Andhra Pradesh.
- )] Study of the above mentioned block printed textiles with reference to origin, technique, raw material, colours, motifs and layout.
- )] Overview of the historic block printed textiles and the contemporary scenario.

### **Methodology of Teaching**

- )] Illustrated lectures.
- )] Visit to local museums/haats/exhibitions of craft based products.

### **References**

- )] Traditional Indian Textiles, Students Handbook & Practical Manual, Published by CBSE.
- )] Barnard, Nicholas & Gillow, John (1991), Traditional Indian Textiles (Thames & Hudson Ltd.: London).
- )] Dhamija, Jasleen & Sarabhai, Mrinalini (1988), Patolas & Resist Dyed Fabrics of India, (Mapin Publishers: Ahmedabad).

## **Unit-4: Hand-Woven Textiles**

**10+10**

### **Objectives of the Unit**

- )] To introduce the technique of handloom weaving in India.
- )] To create awareness about the different handlooms used for weaving.
- )] To initiate identification of regional variations practiced by various weaving communities.



- )] To understand the origin of technique and design with reference to colours, motifs, layouts of different hand-woven textiles.
- )] To learn about the evolution of hand-woven textiles over a period of time.

### **Learning Outcomes**

After completing the unit, the students shall be able to.

- )] Appreciate the finer nuances of handloom weaving.
- )] Classify the regional weaves of India.
- )] Identify the different handlooms used in India.
- )] Identify a specific hand-woven textile of India on the basis of technique, raw material, colours, motifs and layout.
- )] Identify the influencing factors for development and evolution of a specific hand-woven textile.

### **Course Content**

- )] Introduction to traditional hand-woven textiles from different regions of India.
- )] Categorisation of weaving styles on the basis of end product:
  - (a) Saris.
    - (i) Benaras Brocades.
    - (ii) Bauchari, Jamdani.
    - (iii) Paithani.
    - (iv) Kanjeevaram.
    - (v) Chanderi, Maheshwari.
  - (b) Shawls.
    - (i) Kashmir shawl.
    - (ii) Kullu & Kinnaur.
    - (iii) Wraps of North-east.
  - (c) Floor coverings.
    - (i) Carpets.
    - (ii) Durries.
- )] Study of the above mentioned hand-woven textiles with reference to origin, technique, raw material, colours, patterns, layout and end product.
- )] Overview of the historic hand-woven textiles and the contemporary scenario.

### **Methodology of Teaching**

- )] Illustrated lectures.
- )] Visit to local museums/haats/exhibitions of craft based products.

### **References**

- )] Traditional Indian Textiles, Students Handbook & Practical Manual, Published by CBSE.

- ) Barnard, Nicholas & Gillow, John (1991), Traditional Indian Textiles (Thames & Hudson Ltd.: London).
- ) Dhamija, Jasleen & Jain, Jyotindra (1989), Handwoven Fabrics of India (Mapin Publishing: Ahmedabad).

**CLASS–XII**  
**PRINTED TEXTILE (778)**  
**(ANYONE FROM PRINTED TEXTILE OR TEXTILE CHEMICAL PROCESSING)**

**Preamble**

Textile printing or printed Textiles is as old as mankind. The earliest examples can be found as early as fifth century. Various records show that printed fabric did exist about 2500 B.C. It is believed that people of China and India were the first to make simple blocks for the printing of cotton cloth, and it is certain that Textile printing was a fairly established Industry in India during the earliest of the Christian era.

Textile prints have played an important role in developing various surfaces. Each region has its own intrinsic style, color and pattern. In India, printed textiles are very popular and are printed in various styles and methods depending on the geographical region.

The prints are now visible in various products like bags and lifestyle accessories.

The purpose of the course “Printed Textiles” is to inform students about the fundamentals of Textile prints. The course will give an overview of History of printed Textiles, Categories of Printed Textiles, Styles and Methods of Printing Textiles and Basic print Design Techniques.

**THEORY + PRACTICAL**

*Time: 2.5 Hours+2.5 Hours*

*Theory: 50 Marks + Practical: 50 Marks*

**Unit–1: Introduction to Print Design**

**Theory: 15**

**Objectives of the Course**

- ) To introduce and understand Print Design development.
- ) Relevance of Reference material.
- ) Understanding Textile Design, repeat and layout.

**Learning Outcome**

After finishing the unit, the students shall be able to.

- ) Understand the basic requirement for print Design development.
- ) List the historical printed textiles.
- ) Identify the pattern, repeat and layout.
- ) Identify the influencing factors for design development.

**Course Content**

- ) History of printed textiles.
- ) Understanding the similarity and difference between art and design.
- ) Various aspects of Textiles Design: Reference material, color, layout and repeats.

**Methodology of Teaching**

- ) Illustrated lectures.
- ) Visit to Museum.

### Reference Books

- ) Printed Textile, Students Handbook & Practical Manual, Published by CBSE.
- ) Mary Schoeser, Celia Rufey – Thames and Hudson - English and American textiles 1790 to present.
- ) Joyce Storey – 1972-1992, The Thames and Hudson manual of Textile printing.
- ) Carol Joyce – Watson- Guptill publication – 1997, the complete Guide to Printed textile for apparel and Home Furnishing.
- ) Vegetable dyed and printed textiles from India, HHEC.

## Unit-2: Categories of Printed Textiles

Theory: 15 + Practical: 10

### Objectives of the Course

- ) To develop an understanding for surface design development.
- ) To sensitize students towards various types of Prints.
- ) To understand forms, shape and color combinations for various categories.
- ) To sensitize students towards specific influencing forms, objects and shapes.
- ) To develop an ability to recognize the design in each type of print.

### Learning Outcome

- ) After completing the unit, the students shall be able to.
- ) Understand forms and colour combinations.
- ) Develop an understanding for various categories of prints.
- ) Identify the types of prints.

### Course Content

Introduction to various types of Design and their categories.

- ) Toile prints.
- ) Pucci prints.
- ) Geometric prints.
- ) Graphic prints.
- ) Floral prints.
- ) Conversational prints.
- ) Liberty prints.
- ) Country inspired prints.
- ) Nautical prints.
- ) Victorian prints.
- ) Scenic prints.

- ) Animal prints.
- ) Ethnic prints.
- ) Folklore prints.

### **Methodology of Teaching**

- ) Illustrated lectures.
- ) Demonstration and Practical Assignments.

### **Practical Assignments**

- ) Collection of prints as per specified categories and preparation of swatch book.
- ) Development of one print in each categories 8"x8" block.

### **Reference Books**

- ) Printed Textile, Students Handbook & Practical Manual, Published by CBSE.
- ) S. Meller, J. Elfers Thames and Hudson Ltd. Textile designs – 200 years of patterns for Textiles.
- ) Carol Joyce – Watson- Guptill publication – 1997, the complete Guide to Printed Textile for apparel and Home Furnishing.

## **Unit–3: Basic Print Design Techniques**

**Practical: 30**

### **Objectives of the Course**

To develop an Interest and confidence for creating Print designs.

- ) To explore various art media for developing interesting design.
- ) To develop the ability to choose the most appropriate technique for creating interesting designs.

### **Learning Outcome**

After completing the unit, the students shall be able to.

- ) Create interesting design by using various art media.
- ) Appreciate the techniques involved in developing interesting textures.
- ) Use art media more appropriately and confidently.
- ) Develop interesting colour combinations and designs.
- ) Understand the relation between forms and background.

### **Course Content**

Use of following innovative techniques for development of interesting surfaces.

- ) Etching.
- ) Stencil.
- ) Collage.
- ) Inter-cutting.
- ) Resist (Bleach/Wax).
- ) Dry-brush.

- ) Photocopy.
- ) Sponge.
- ) Stamping.

### **Methodology of Teaching**

- ) Illustrated lectures.
- ) Demonstration and Practical Assignments.

### **Practical Assignments**

- ) Preparation of Textile designs using different techniques.
- ) Development of thirty 8x8 swatches in different techniques and mix media.

### **Reference Books**

- ) Printed Textile, Students Handbook & Practical Manual, Published by CBSE.
- ) Carol Joyce – Watson- Guphill publication – 1997, The Complete Guide to Printed Textile for Apparel and Home Furnishing.
- ) Angel Fernandez –A&C Black, 2009, Fashion print Design.

## **Unit–4: Style & Methods of Printing Textiles**

**Theory: 20 + Practical: 10**

### **Objectives of the Course**

- ) To introduce styles and Methods of Printed Textiles and its effect of design.
- ) To learn the process involved in Printing Textiles.
- ) To gain Knowledge of evolution of printing process.
- ) To understand the origin and history of styles and methods.

### **Learning Outcome**

- ) After completing the unit, the students shall be able to.
- ) Understand the different styles and methods involved in printing Textiles.
- ) Identify the correct method and style for printing Textiles.
- ) Recognize the difference between different kinds of prints.
- ) To get an overview of printing methods.

### **Course Content**

Study of Styles and Methods involved in printing Textiles.

- ) Direct, Resist and Discharge Methods.
- ) Block Printing Style.
- ) Screen Printing Style.
- ) Roller Printing Style.
- ) Digital Printing Style.
- ) Transfer Printing.

- ) Foil Printing.
- ) Hand Printing.
- ) Sublimation.

Printing of designs using different methods and styles of printing.

### **Methodology of Teaching**

- ) Illustrated lectures.
- ) Demonstration and Practical Assignments.

### **Practical Assignments**

- ) Printed Textile, Students Handbook and Practical Manual, Published by CBSE.
- ) Preparation of Textile designs for developing screen and block printed swatches.
- ) Development of twenty 8x8 swatches in different styles of printing.

### **Reference Books**

- ) Joyce Storey – 1972-1992, The Thames & Hudson manual of Textile printing.

## **CLASS–XII**

### **TEXTILE CHEMICAL PROCESSING (779)**

**(ANYONE FROM PRINTED TEXTILE OR TEXTILE CHEMICAL PROCESSING)**

### **Objectives of the Course**

- ) To gain an overview of processes involved in Dyeing , Printing and Finishing of Textile materials.
- ) To familiarize students about chemical processing and its role in fabric Manufacturing.
- ) To introduce preparatory process of major Textile fibers.
- ) To study dyeing printing and finishing of Natural fibers.

## **THEORY**

*Time: 2.5 Hours*

*Marks: 50*

### **Unit–1: Introduction to Chemical Processing-Pretreatments**

**15**

#### **Course Content**

- ) Textile Chemical processing for fibers.
- ) Impurities present in the Natural and Synthetics Fibers.
- ) Elementary knowledge of processing.
- ) Different processes e.g., singeing, de-sizing, scouring, bleaching & mercerizing.

#### **Learning Outcome**

After finishing the course, students will be able to understand.

- ) Various technical terminology used in the industry.
- ) Various types of impurities presents in the Substrates.

- ) The processes involved in removing impurities.

### **Teaching Methodology**

- ) Illustrated Lectures with Power Point presentation and Slides.

## **Unit-2: Textile Dyeing**

15

### **Content**

- ) Suitability of Dyes and dyeing methods, important classes of dyes for natural and man-made fibers e.g., direct, acid, basic, vat, azoic, sulfur and disperse dyes.
- ) Important features of dyes.
- ) Dyeing machines & special dyeing effects.

### **Learning Outcome**

After finishing the course, students will be able to.

- ) Dye all kind of Textile Fabrics.
- ) Select dyes as per the type of fabrics.
- ) Identify dyeing methods used in the Industry.

### **Teaching Methodology**

- ) Illustrated Lectures with Power Point presentation and Slides.

## **Unit-3: Textile Printing**

10

### **Content**

- ) Printing paste ingredients.
- ) Introduction to various methods of printing , specific features and limitations of various methods, Such as Hand Block Printing, Hand Screen printing, Automatic Flat Bed Screen Printing, Rotary Screen Printing, Heat Transfer Printing.
- ) Style of Printing (Direct Prints, Discharge Prints, Resist Prints, Pigment Prints, Blotch Prints, Flock Prints, Burnout Prints, Duplex Prints, Engineered Prints, Warp Prints) & their Specific feature for their Identification.

### **Learning Outcome**

After finishing the course, students will be able to understand.

- ) Various terminology used in textile printing.
- ) Styles and methods involved in printing.
- ) Various effects produced by various styles of printing.
- ) Limitation of the printing methods.

### **Teaching Methodology**

- ) Illustrated Lectures with Power Point presentation and Slides.

## **Unit-4: Textile Finishes**

10

### **Content**

- ) Classification of the finishes.
- (i) According to Designer/Merchandiser /Sales Persons.
  - (ii) According to Textile Chemist.
  - (iii) According to Degree of Performance.

- ) Objectives of the various finishes.
- (i) Types of Calendaring and its objective.
  - (ii) Napping.
  - (iii) Emerizing.
  - (iv) Parchmentising.
  - (v) Shape Retention Finishes.
  - (vi) Shrinkage Control Finishes.
  - (vii) Sanforizing.
  - (viii) Decatizing.
  - (ix) Soil Release /Stain Repellent Finish.
  - (x) Water Repellent & Water Proofing.
  - (xi) Anti – Microbial Finish.
  - (xii) Flame Retarding Finish.
  - (xiii) Garment Washing.

### **Learning Outcome**

After finishing the course, students will be able to understand.

- ) Types of finishes and their performance.

### **Teaching Methodology**

- ) Illustrated Lectures with Power Point presentation and Slides.

## **PRACTICAL**

**Time: 2.5 Hours**

**Marks: 50**

### **Experiments :**

- |   |   |
|---|---|
| 1. Desizing of cotton Fabrics by Acid Desizing method and calculate the weight loss in the Process. | 2 |
| 2. Scouring of cotton by Sodium Hydroxide and measure water permeability of the process.            | 2 |
| 3. Bleach the cotton fabric with the bleaching powder or Sodium Hypo chlorite.                      | 2 |
| 4. Bleach the cotton fabric by hydrogen Peroxide.   | 2 |
| 5. Degumming of the Silk.   | 2 |
| 6. Bleaching of the silk with the Hydrogen Peroxide.  | 2 |
| 7. Dyeing of cotton with Direct Dyes.   | 2 |
| 8. Dyeing of cotton with Reactive dyes.   | 2 |
| 9. Dyeing of cotton with Vat dyes.  | 3 |
| 10. Dyeing of cotton with Sulphur dyes.   | 3 |
| 11. Dyeing of cotton with Azo dyes.   | 2 |
| 12. Dyeing of wool with Acid Dyes.  | 2 |



13.	Dyeing of wool with Reactive Dyes.	2
14.	Dyeing of Silk with Acid Dyes.	3
15.	Dyeing of Nylon with Acid Dyes.	3
16.	Tie and dye of cotton with Direct dyes (Resist Print).	2
17.	Batik Print on the Cotton Fabrics (Resist Print).	3
18.	Printing on the polyester fabrics by Pigment colour.	3
19.	Printing on cotton fabrics by Naphtholcolours.	3
20.	Printing on cotton fabric with natural colours.	3
21.	Collect the sample of finished fabrics and describe the type of finishes it may have.	2

## **MARKING SCHEME**

**Two Practical from each Section shall be Conducted.**

(i)	Session Work.	20
	Maintenance of Record.	
	On the Lab Learning.	
(ii)	Viva Voice.	10
(iii)	All the laboratory experiments will carry five marks each, they should be evaluated on the basis of evenness of the dyeing and printing, neatness and cleanliness maintained during the practical.	20

## **CLASS–XII**

### **GENERAL FOUNDATION COURSE (501)**

*Time: 3 Hours*

*Marks: 100*

#### **Part–I: (Compulsory to all Vocational Courses)**

*Marks: 50*

<b>A.</b>	<b>Business Management and Entrepreneurship</b>	<b>30</b>
	<b>Management of Business</b>	
	Elementary treatment/exposure to basic conceptual frame work of the topic listed below:	
(a) <sub>1</sub>	Basic Function.	6
(b)	Marketing Management.	6
(c)	Financial Management.	6
(d)	Production Management.	6
(e)	Personnel Management.	6
<b>B.</b>	<b>Computational Skills</b>	<b>10</b>
1.	(a) Solution of linear equations and their application to problem of commercial mathematics.	5
	(b) System of linear equations and in equation in two variables. Applications in formation of simple linear programming problems.	
2.	Statistics: Raw data, bar charts and Histogram; Frequency Tables; Frequency Polygon; Ogive; Menu, Median and Mode of ungrouped and grouped data; Standard Deviation; Introduction to Mortality tables; Price Index etc. Introduction to Computers.	5
<b>C.</b>	<b>Environmental Education &amp; Rural Development</b>	<b>10</b>
1.	<b>Environmental Education</b>	<b>5</b>

- (a) Modernisation of agriculture and environment, irrigation, water logging, use of fertilisers, pesticides, soil erosion, land degradation (desertification and deforestation), silting and drying of water resources.
- (b) Rational utilisation, conservation and regeneration of environmental resources (soil, air, water, plant, energy, minerals).

2. **Rural Development** 5  
Principles and goals of rural development, major problems/constraints in rural development in India.

**Part-II**

*Marks: 50*

**I. Development of Dyeing, Printing and Painting with Special Reference to Indian Fabrics** 5

- 1 ) Resist dyed.
- ) Printed.
- ) Painted.

**II. Traditional Indian Printed and Painted Fabrics.** 12

- 1 ) Kalamakari of AP.
- ) Phad painting.
- ) Pichhwals.
- ) Madhubani.
- ) Gujarat Printing Saudagiri.
- ) Ajrak.
- ) Bagru Prints.

**III. Resist Dyed Fabrics: Study with Respect to the Techniques used, Design etc.** 10

- ) Bandhani of Gujarat and Rajasthan.
- ) Ikat of Orissa.
- ) Patola of Gujarat.
- ) Telia Rumal, Mashru.

**IV. Traditional Woven Textiles - Motifs and Techniques.** 18

- ) Balucharis and Jamdani of Bengal.
- ) Brocades of Banaras.
- ) Painthani of Maharashtra.
- 1 ) Tanchoi.
- ) Shawls of Kashmir.
- ) Woven fabrics from North East States.
- ) Carpets and Rugs.

**V. Catalogue of Design Related to Printed, Painted Resist Dyed and Woven Textiles.** 5

**LIST OF RECOMMENDED BOOKS**

1. Textile Science, Students Handbook & Practical Manual, Class XI, Published by CBSE.
2. Textile Chemical Processing, Students Handbook & Practical Manual, Class XII, Published by CBSE.

3. The Ashford book of Dyeing by Ann Milner.
4. Lab experiments on textile chemical processing by S.P. Mishra.
5. Chemistry of dyes and principles of dyeing by Dr. V.A. Shenai.
6. Technology of Bleaching and Mercerizing by Dr. V.A. Shenai.
7. Technology of Printing by Dr. V.A. Shenai
8. Technology of Textile Printing By R.S.Prayag.
9. Textile chemical Processing by P. Angappan, A. Edwin Sunder,V. Ilango.
10. Chemical treatments of textiles for colouration by P. Angappan, A. Edwin Sunder,V. Ilango.
11. The Dyeing of Textile fibres by Joseph Rivlin.
12. Dyeing and Chemical Technology for textile fiber by E R Trotman.
13. The Dyeing of Textile Materials by Jose Ceggra.
14. Cellulosic Dyeing by J Shore.
15. Color for Textiles by W Ingamells.
16. Handbook of Textile Processing Machineries By R S Bhagwat.
17. Textile Dyeing Operations By S V Kulkarni, CD Blackwell, AL Blackard, AW Alexander.
18. Textile Auxiliaries and Finishing Chemicals by AA Vaidya and SS Trivedi.
19. Fiber to Fabric by Corbman.

## **LIST OF FABRIC, DYES, CHEMICALS AND EQUIPMENTS**

1. Fabrics : Silk, wool, Nylon, PET, Acrylic, Blends - 2 ml each.
2. Dyes : Acid dyes, Reactives, Disperse dyes.  
Basic dyes - 100 gms - 250 gms,
3. Chemicals required:
  - H<sub>2</sub>O<sub>2</sub>,NaCl.
  - Formic Acid, CH COOH.
  - R Salt L.
  - Sodium Bicarbonate.
  - Sodium Chloride.
  - Sodium hydrosulphate.
  - Urea.
  - Potassium Carbonate.
  - Sodium Chlorate.
  - Gums - Alginate, Indalca.
  - Lacquer, coloured Discharging chemicals.
  - 90% phenol.
  - Sy-cresol.
  - Con. HNO<sub>3</sub>.
  - Ammonia.
  - Borax.
  - Iodene.
  - Benzene.

Petrol (White).  
Carbon-tetra-chloride.  
Acetone.  
Turpentine oil.  
Sol. hydroxide.  
Glycine.  
Soap sol.  
Sodium hypochlorite.  
Sodium carbonate.  
Potassium permanganate.  
Sodium hydrosulphite.  
Sod. bi Sulphite.

## **EQUIPMENTS FOR PRINTING LABORATORY**

1. Tables : Teak or Kail top.  
22 cm × 540 cm : Covered with 6 layers of Jute and one layer of marken.
2. Printing trolleys (for each table).
3. Printing trays (for block printing for each table (enamel trays) about 27 cm × 38 m.
4. Weighing scale for measuring.
5. Thermometer for maintaining a chart for the exact shade.
6. Staple gum for fixing the Nylon to the wooden frames – 1.
7. Steamer : For fixing the colour and the fabric – 1.
8. Oil Stove : For beating the colour for Rapid indigo dyes.
9. Bowls Enamel : 4 Bowls for 10<sup>3</sup> diameter for each table. 4 Bowls of 5<sup>3</sup> diameter for each table (To mix the dyes).
10. Spoons:  
4 table spoons stainless steel for each table.  
4 wooden spoons for each table.
11. Squeezers : 30 cms : 15 cms : 20 cms for each table for screen printing.
12. Air tight containers for storing readymade colours (wide mouthed bottles).
13. Brushes : Artists brushes : Complete set.
14. Tools for carving wooden blocks.
15. Screens rack for keeping the readymade screens.
16. Wooden Screens 25 cms × 25 cms.  
30 cms × 65 cms.  
35 cms × 45 cms.
17. Measuring cylinders 500 ml.
18. Set of lino tools.
19. Roller for paints : 3 different standard sizes.

## **CONSUMABLE MATERIALS FOR PRINTING LABORATORY**

1. Staples for the Staple Gum.
2. Organdie Fabric or Nylon Fabric for Screen.
3. 0.5 cm thick foam for the trays.
4. Jute and Muslin cloth for the trays.
5. Linoleum sheet.
6. Turpentine oil.
7. Enamel Paint (white).
8. Fevicol and quick fix.
9. Blocks for printing (sagwan wood).
10. Enamel paints.
11. Cartridge papers.
12. Dyes for printing of following types:
  - (i) Potato printing (Craylin colours).
  - (ii) Match stick printing (Craylin colours).
  - (iii) Lino Printing (Acramin dyes) with layer of printing inks.
  - (iv) Block printing (indigo and rapid/Acramin dyes).
  - (v) Screen printing:
    - ) Paper cut screens.
    - ) Enamel screens.
  - (vi) Card board 5 mm thick.
  - (vii) Match boxes.
  - (viii) Mustard oil.
  - (ix) Multani mitti (block makers).



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# DESIGN & INNOVATION

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## Introduction

The Course on Design Fundamental is intended to introduce ideas, methodologies, principles, and skills that comprise a common knowledge base important to all design disciplines. These fundamental will foster a multidisciplinary design experience among students and will prepare them to move to the next level. It will provide the participants with foundation and fundamentals skills in design. The program is designed to provide a pathway to a range of vocational qualifications, including diplomas of graphic design, visual merchandising, visual arts, digital design, screen and performing arts.

The program provides a comprehensive range of skills and knowledge required as preparation for entry level jobs. The course will benefit applicants who have little or no training or experience in art and design and who wish to begin formal education in this field.

## CLASS–XI ELECTIVE DESIGN & INNOVATION (772) THEORY

*Time: 3 Hours*

*Total: 100 Marks  
Theory: 60 Marks  
Practical: 40 Marks*

### Unit–1: Introduction to Design

#### Session–1: Concept of Design

- ) Design Definition.
- ) Design versus Art.
- ) Design and Environment.
- ) The basis of Design Process.
- ) Use Design in today's scenario.

#### Session–2: Design Fundamental

- ) Principles of Design.
- ) Elements of Design.
- ) Colour Theory.
- ) Understanding of Color wheel.
- ) To increase and build sensitivity to the forms around them.
- ) To identify the revolving still life and outdoor in vicinity of environment.
- ) To relate the elements of design to understand design process for their projects.
- ) Understanding the colour quality, intensity, relationship with other colours, textures, shape.

### Unit–2: Design Tools and Techniques

#### Sessions–1: Produce Drawing

- ) Defining Drawing.
- ) Different techniques of drawing.
- ) Exploration of medium.
- ) Compositions and Perspectives.
- ) Tonal Techniques.
- ) Use of Dreams and Music for creative Drawing.
- ) To identify the use of tone and value, Texture/Frottage.
- ) Identify to use contour line drawing (continuous or cross contour).

### **Unit-3: Occupational Health and Safety**

#### **Session-1: Work Safe Review Module**

- ) Safety and Health responsibility.
- ) Role of War safe Inspector.
- ) Hazard identification, Risk assessment and Risk control.
- ) PPE.
- ) Dealing with emergency.
- ) Design a promotional poster advertising what students need to know about Safety and Dangers, or be warned about while working at College.

### **Unit-4: Practical Workshop**

#### **Session-1: Knowledge Workshop**

- ) Source and apply design industry knowledge.
- ) Source and apply information on the history and theory of design.
- ) Project 1: Research on a Contemporary designer.
- ) Project 2: Photograph and Report on Signage and Window display.
- ) Project 3: Critique the Design of a Product.

#### **Session-2: Design Concepts Workshop**

- ) Design concepts workshop road signs.
- ) Design concepts workshop zoological and botanical logo.
- ) Design concepts workshop T-shirts design.

#### **Session-3: Graphic Design Workshop**

- ) Produce Designs for Clothing Range, Shoes or CD Cover.
- ) Color zones applied Colour assessment.
- ) Poster Design for an Opera or Ballet.

**CLASS–XII**  
**ELECTIVE**  
**DESIGN & INNOVATION (772)**  
**THEORY**

*Time: 3 Hours*

*Total: 100 Marks*  
*Theory: 60 Marks*  
*Practical: 40 Marks*

**Unit–1: Three Dimensional Design** **10**

**Session–1: Introduction to Fundamentals of 3-Dimensional Design**

- ) Differentiate 2-dimensional and 3-dimensional design.
- ) Explore and apply the creative design process to 3D forms.
- ) Produce Sculpture using Three Dimensional.
- ) To apply creative design process to the development of 3-dimensional forms.

**Session–2: Three Dimensional Design Workshop** **10**

- ) Project 1: 3D Design hand cutting tool.
- ) Project 2: 3D Design Maquette Construction.
- ) Project 3: 3D Design Bridge Design.
- ) Project 4: 3D Design Shop Refit.

**Unit–2: Three Dimensional Design Applied** **15**

**Session–1: Introduction to Spatial Design**

- ) Principles and Elements of 3-D Design Applied.
- ) Research and apply techniques for application to spatial design.
- ) Explore the use of colour in 3-D Design.

**Session–2: Spatial Design Workshop**

- ) Project 1: Exploration and use of 3-D Elements of Design.
- ) Project 2: Colour Sphere Model to explore Hue and Value
- ) Project 3: To create a Exhibition Design on any theme; Examples part A: Unity, Harmony

**Unit–3: Design Tools and Techniques – Digital** **10**

**Session–1: Introduction to 3-D Design Digital Tools**

- ) Methods of developing 3-dimensional design.
- ) Brief study on software applications like Photoshop, AutoCAD, Flash, Corel and Maya

**Unit–4: Digital Workshop** **15**

- ) Apply techniques to produce digital images.
- ) Digitise images for reproduction.



- ) Project 1: Digital workshop Animorph.
- ) Project 2: Magazine Cover.
- ) Project 3: The World's Greatest Poster.

## LAB REQUIREMENT FOR TWENTY STUDENTS

S. No.	List of Items
1.	<p><b>Technical Drawing Equipment</b></p> <ul style="list-style-type: none"> <li>) Computer station Licensed software (Autocad by Autodesk or Adobe Creative Suite CS6 or higher).</li> <li>) Printer.</li> <li>) Photography supplies, digital photo frame, access to photo printers.</li> </ul>
2.	<p><b>Drawing Equipment and Materials</b></p> <ul style="list-style-type: none"> <li>) Soft boards All around the walls.</li> <li>) Stools.</li> <li>) Black board.</li> <li>) White board.</li> <li>) Crayons, pastels, charcoal.</li> <li>) Colored pencils, pens, washable markers, calligraphy pens, erasers.</li> <li>) Variety of paper, cardboard.</li> <li>) Dry-erase boards, markers.</li> <li>) Chalk, chalk board, erasers.</li> <li>) Non-toxic paint (tempera, acrylic, oil, water colour, finger paint).</li> <li>) Colored ink, stamps, wood blocks, natural materials, cardboard.</li> <li>) Paint brushes, rollers, squeeze bottles, spray bottles, sponges, paint scrapers.</li> <li>) Glue, paste, glue sticks, pots, brushes, spreaders.</li> <li>) Paper scraps, magazines, cards, wrapping paper, ribbon, cellophane, newspapers.</li> <li>) Cardboard tubes, boxes, rolls.</li> <li>) Pair of scissors.</li> <li>) Staplers.</li> <li>) Geometry sets.</li> <li>) Paper punches.</li> <li>) Clips, thumb tacks.</li> <li>) Adhesive tapes, glue, craft glue.</li> <li>) Sandpaper, cloth, string, wire.</li> </ul>



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# MUSIC TECHNICAL PRODUCTION

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## Introduction

This Course will provide the students with a practical introduction to recording processes including, mixing, editing and post-production. It will aid the students to gain skills in recording studios and performance venues and get on track to a career in technical production. Also it will develop the necessary skills to record and produce music as well as live sound operation. This course will allow the students with the opportunity to participate in recording sessions and follow the production processes through to the completion of a demo recording. Moreover, it is intended to give the students the basic skills to begin an exciting career in music sound production or for the further study.

## CLASS–XI ELECTIVE MUSIC AESTHETICS (768) THEORY + PRACTICAL

*Time: 2.5+2.5 Hours*

*Theory: 50 Marks  
Practical: 50 Marks*

### SECTION–I

#### 1. Learning Objectives

**Theory: 5**

(a) **BSBOHS201A Participate in OHS Processes**

Unit Descriptor, Elements and Performance Criteria Pre-Content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

(b) **CUFIND201A Develop and Apply Creative arts Industry Knowledge**

Unit Descriptor, Elements and Performance Criteria Pre-Content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

(c) **CUSMLT201A Develop and Apply Musical Ideas and Listening Skills**

Unit Descriptor, Elements and Performance Criteria Pre-Content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

#### 2.

(a) **OHS and Music Industry and Assignments**

**15+15**

Introduction, Activity, Overview, Distribution, Role in music business, Song writers and the role of the publisher, Mechanical royalties, Performing royalties, New Technology, Music Industry-management, Music industry-the laws, promoting a band, Stickers, Banners, Business cards, Flyers and posters, Website\ Facebook\ Myspace, Merchandise Table, Emails, Utilize the internet, Developing an image for a band, putting on a gig, Secretes to success in the music industry.

(b) **Studio Location and Assignments**

**15+20**

Introduction, Fire safety, A historical world tour of music, Live performances, Introduction to musical styles, Broad categories of music – art music , popular music, traditional music, music genres, Examining the styles of the blues, Characteristics of the blue form, Practicing the style of “The Blues”, Examining the style of “Ska and Reggae”, Rock steady, Reggae takes over, Reggae’s transformation, Music characteristics, Etymology, History of reggae, Music characteristics, Drums and other percussion, Bass, Guitars, Keyboards, Horns, Vocals, Lyrical themes, Criticism of dancehall and ragga lyrics, Subgenres, Early reggae, Roots Reggae, Dub, Rockers, Lovers rock, Newer Styles and spin-offs, Dancehalls, Raggamuffin, Reggaeton, Reggae Fusion, Reggae outside the Caribbean, Practicing the style of Ska/ Reggae, Examining the styles of the rock, Practicing the style of rock, Music Style – Metal, Heavy metal, History of Heavy Metal, Musical and Vocal Styles, Genres, Avant Grade Metal, Black Metal, Celtic Metal, Death Metal, Doom Metal, Gothic Metal, Grindcore, Hair Metal, Metalcore, New wave of British

heavy metal (NWOBHM), Nu-metal, Power metal, Progressive metal, Thrash metal, The future of heavy metal, Practicing the style of Metal, Recording time.

## SECTION–II

### 1. Learning Objectives

**Theory: 5**

(a) **CUESOU07B Apply a General Knowledge of Audio to Work Activities**

Unit Descriptor, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

(b) **ICAU2005B Operate Computer Hardware**

Unit Descriptor, Elements and Performance Criteria Pre-Content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

### 2. Laboratory Lesson Plans and Assignments

**10+15**

Introduction, Hardware/Software relationships, Introduction to DAW (Digital Audio Workstation), Introduction to Garage Band, Features of Garage Band, Recording audio into Garage Band, Practical time for Garage Band, Introduction to Apple Logic, Using MIDI and MIDI editing in LOGIC, Recording audio into Logic, Features of Logic, Practical time for Logic, Introduction to mixing, Using mixing tools, Introduction to EQ, Introduction to Effects, Introduction to Dynamics.

## CLASS–XI

### ELECTIVE

## MUSIC PRODUCTION (769)

### THEORY + PRACTICAL

*Time: 2.5+2.5 Hours*

*Theory: 50 Marks*

*Practical: 50 Marks*

## SECTION–III

### 1. Learning Objectives

**Theory: 5**

(a) **BSBWOR203A Work Effectively with Others**

Unit Descriptor, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

(b) **CUSSMLT202A Apply Knowledge of Music Culture to Music Marking**

Unit Descriptor, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

(c) **CUSMPF201A Play or Sing Simple Musical Pieces**

Unit Descriptor, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

### 2. Music Culture and Assignments

**10+20**

Introduction, What is Music?, What is Culture? , Modern music, Examining music cultures around the world, Examining Australia's music culture, The future of Music Industry, Examining the musical instrument: Human voice, Examining the musical instruments: the guitar, Types of Guitars, Examining the musical instruments: the piano, Examining musical instruments – percussion, Examining musical instruments: Synthesizers-what is a Synthesizer, How a Synthesizer creates a sound, Signal generating and processing components, Modulation and control components, Oscillators, Common Synthesizer waveforms, Noise: Pink/red, blue, white, Reshaping waveforms, Filters, Types of filters, Cutoff frequency, Resonance, Drive, Filter Slope, Modulation, LFO Controls, LFO envelopes, Global controls, Introduction to music notation, time signatures, scales, Music theory-Chords and symbols, What is an ensemble.

## SECTION–IV

- |   |                  |
|---|------------------|
| <b>1. Learning Objectives</b>   | <b>Theory: 5</b> |
| (a) <b>CUSSOU201A:</b> Assist with sound recording.                     |                  |
| (b) <b>CUETGE15B:</b> Handle physical elements during bump in bump out. |                  |
| 2. <b>Introduction and Assessment:</b> Digital portable recorders.      | <b>10+10</b>     |
| 3. <b>Resources and Assessment:</b> Sound production specialist.        | <b>10+10</b>     |
| 4. <b>Additional resources.</b>   | <b>10+10</b>     |

**CLASS–XII**  
**ELECTIVE**  
**MUSIC AESTHETICS (768)**  
**THEORY + PRACTICAL**

*Time: 2.5+2.5 Hours*

*Theory: 50 Marks*  
*Practical: 50 Marks*

**Unit–1:** **10+10**

1. **Learning Objectives**  
CUESOU07B Apply a general knowledge of audio to work activities.  
Unit Descriptor, Elements and Performance Criteria Pre-content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.
2. **Assessment** - apply audio activities, create a system diagram, create an input list and stage production, Live sound required skill is knowledge test.
3. **Assessment matrix.**

**Unit–2:** **15+25**

1. **Learning Objectives**
  - ) CUEIND01C Source and apply entertainment industry knowledge.
  - ) CUFSSOU204A Perform basic sound editing.
  - ) CUSOHS301A Follow occupation health and safety procedures.
  - ) CUSMPF304A Make a music demo.

Unit Descriptor, Elements and performance criteria Pre-content, elements and performance criteria, required skills and knowledge, range statements.
2. **Resource** - Working in groups, diversities.
3. **Assessment** - Arrange audio lops, industries bodies, industries overview, song structure and arrangement, copy right.

**Unit–3:** **25+15**

1. **Learning Objectives**
  - ) CUESOU03C Operate professional audio equipment.
  - ) BSBWOR203A Work effectively with others.
  - ) CUECOR01C Manage own work and learning.
  - ) CUESOU09B Manage and compile audio replay material.
  - ) CUSSOU302A Record and mix a basic music demo.

Unit Descriptor, Elements and performance criteria Pre-content, elements and performance criteria, required skills and knowledge, range statements.

2. **Resource** - Basic mics principles, Week four pro tools session, Week 5 pro tools session, Week 6 logic session, Week 7 pre-assessment exercise, Wee 8 Logic session, Week 9 lesson plan, Week 10 lesson plan, Work effectively with culturally diverse clients and co-workers, Working in Groups Diversity.
3. **Assessment Tools** - Documentation, Portable recording practical demonstration, Studio session participation, final CD portfolio submission.
4. **Assessment matrix.**

**CLASS–XII**  
**ELECTIVE**  
**MUSIC PRODUCTION (769)**  
**THEORY + PRACTICAL**

*Time: 2.5+2.5 Hours*

*Theory: 50 Marks*

*Practical: 50 Marks*

**10+5**

**Unit–1:**

1. **Learning Objectives**

CUESOU01C Repair and maintain audio equipment.

Unit Descriptor, Elements and Performance Criteria Pre-content, Elements and Performance Criteria, Required Skills and Knowledge, Range Statement.

2. **Resources**

**30+25**

Maintenance overview, Electric shock precautions, connectors, Cabling, Balanced and Unbalanced wiring, Microphone Theory, Microphone characteristics, Microphone construction, console maintenance, alignments of signals, tape machine power amps fuses, electric theory, circuit types, effect of conductor mass on current draw.

Repair and maintain sound equipment.

Workshop rules and safety, XLR Parts, Soldering workshop task 1, adaptor lead construction, testing leads using a cable lead, testing leads using a multi meter.

3. **Assessment Tools** - Connector researchers, Microphone research, repair and maintain assessment. **10+20**

**LIST OF RECOMMENDED BOOKS**

1. Music Aesthetics I, Students Handbook, Class–XI, Published by CBSE.
2. Music Production I, Students Handbook, Class–XI, Published by CBSE.
3. Music Aesthetics, Students Handbook, Class–XII, Published by CBSE.
4. Music Production, Students Handbook, Class–XII, Published by CBSE.

**SUGGESTED LIST OF EQUIPMENTS**

- J Microphones – Newmen Condensor Microphones (at least Six).
- Ñ Audio Console 16 track Analogue/Digital.
- Ñ Stand (Giraffe) (6).
- Ñ Computer with sound card and 2 GB Ram & 500 GB.
- Ñ HDD Capable of running Audacity.
- Ñ XLR Cables & Connectors.

- Ñ Jack Connectors.
- Ñ Studio speakers for Monitoring (2 L& R).




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## MASS MEDIA STUDIES AND MASS MEDIA PRODUCTION

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### Introduction

This course aims at grooming the natural talent of students and exposing them to ever-changing skills needed in the media and entertainment industry with hands-on experience. The course is designed to provide fundamental information on analysis of film, TV (including News), print articles, understanding of the pipeline multiple products of the media & Entertainment industry (TV show/segment, film, article, ad – film, etc.), concept of assembly line, animation, roles people play, skills & specializations, the creative process, aesthetics, design, framing, composition, writing, ideation and finally technology usage in the media & entertainment industry.

### CLASS–XI ELECTIVE

## UNDERSTANDING THE EVOLUTION AND FORMS OF MASS MEDIA (738) THEORY + PRACTICAL

*Time: 3 Hours + 2 Hours*

*Theory: 60 Marks  
Practical: 40 Marks*

### Unit–1: Introduction to Mass Communication

**6+4**

- Ñ Introduction to Media.
- Ñ Aspects of Mass Communication.
- Ñ Impact of Mass Communication on psyche and society.
- Ñ Barriers to Communication.
- ) A brief history of Mass Media.

### Unit–2: Understanding Fiction

**12+8**

- ) Story as a self-content world.
- ) Story as a subjective experience.
- ) Content of a story.
- ) Techniques of storytelling.
- ) Genre of a story.
- ) Fable, myth, legend, short story.

### Unit–3: Understanding the Language of the Medium

**18+12**

1. **Understanding of Cinema–I**
  - ) Cinema as a narrative in distinction from the other arts.
  - ) Cinema as a complex narrative.
2. **Understanding of Cinema–II**
3. **Understanding of Television**

- ) Specificity of TV as a medium.
- ) Purpose of TV Programming.
- 4. **Print Media and its Type**
  - ) Types of Print Media.
  - ) Analyzing the content of a newspaper.
- 5. **Radio Genre in Radio Programming**
  - ) News.
  - ) Drama.
  - ) Music.
- 6. **Internet**
  - ) The Internet Players, layers, data.
  - ) How they function and how we connect with them.

#### **Unit-4: Evolution of the Media in Indian Cinema**

**12+18**

1. **Indian Cinema.**
  - ) Hindi cinema.
    - (i) DG Phalke and silent era.
    - (ii) Coming of sound and Studio era.
    - (iii) Satyajit Ray and Non-main stream cinema.
2. **Television in India.**
  - ) Doordarshan in the first phase of local stations: Black and White transmission.
  - ) SITE experiment.
  - ) Color Television, AASIAD 1982-SATELLITE TRANSMISSION [INSAT].
3. Development of press in India.
4. History and Development of Radio Broadcasting.

#### **Unit-5: Understanding Non-Fiction**

**12+8**

- ) Defining Non-fiction.
- ) What is Documentation.
- ) The Approach to Reality.

### **CLASS-XI ELECTIVE**

## **THE CREATIVE AND COMMERCIAL PROCESS IN MASS MEDIA (739) THEORY + PRACTICAL**

*Time: 3 Hours + 2 Hours*

*Theory: 60 Marks  
Practical: 40 Marks*

#### **Unit-1: Introduction to the Production Process**

**18+12**

1. **Film**

- ) Pre- shooting stage.
- ) Shooting Stage.
- ) Post-shooting Stage.
- 2. **TV**
  - ) Pre- shooting stage.
  - ) Shooting Stage.
  - ) Post-shooting Stage.
- 3. **Print**
  - ) Planning, writing, editing, designing.
- 4. **Radio**
  - ) Planning, recording, editing, transmission.
- Internet**
  - ) Planning, creating and delivering.

## **Unit-2: Creative Contributions of the Key People**

**12+8**

- ) **Film:** Contributions made by Writer, Director, Producer, Actor, Cinematographer, Audiographer, Editor, Art Director, Music composer.
- ) **TV:** Contributions made by Writer, Director, Producer, Actor, Cinematographer, Audiographer, Editor, Art Director, Music composer.
- ) **Print:** Contributions made by Reporter, Sub-editor, Editor.
- ) **Radio:** Contributions made by artist, speaker, interviewer, recordist, programme producer, station director.
- ) **Internet:** Contributions made by writer, conceptualizer, editor, designer.

## **Unit-3: Production Skills**

**24+16**

### **Creating Content**

#### **Fiction**

- ) Developing an idea into a story through synopsis, treatment and screenplay.
- ) Understanding the basic concepts like plot, characters, dramatic structure.
- ) Developing the idea in terms of theme, characters, the basic conflict.
- ) Narrating your story using visuals.
- ) Screenplay as distinct from other forms of writing (short stories, novels, plays).

#### **Non-Fiction**

- ) Developing an idea into a script for a documentary through synopsis, treatment and screenplay.
- ) Understanding the basic concepts like synopsis, research, sequencing of ideas.
- ) Understanding documentary techniques like interviewing, voiceover.

### **The production process**

- ) Understand the Production Process by executing two Projects by means of Digital still cameras.

#### **Project-1: Fiction**



- ) Develop an idea into a story by using twenty five still pictures at the most.
- ) Design Record edit sound for the same and present it in a PowerPoint presentation of the duration of between two and three minutes maximum.

**Project-2: Non-Fiction**

- ) Develop an idea into a Non- Fiction Presentation by using twenty five Still pictures at the most.
- ) Design a record that edits sound for the same and present it in a PowerPoint Presentation of the duration of between two and three minutes maximum.
- ) Post-production Process: Post-production work of the above projects in editing and sound.

**Unit-4: Role of Advertising in Mass Communication**

**6+4**

- ) The need for Advertising and Advertising as an engine of growth.
- ) Types of Advertising: product services, classified, public services, industrial, corporate.
- ) Understanding an advertising campaign.
- ) Principles of Advertising and Code of Advertising standards.

**CLASS-XII  
ELECTIVE**

**UNDERSTANDING THE EVOLUTION AND FORMS OF MASS MEDIA (738)**

**THEORY + PRACTICAL**

*Time: 3 Hours + 2 Hours*

*Theory: 60 Marks*

*Practical: 40 Marks*

**Unit-1: Understanding the Language of the Medium**

**24+16**

**Chapter-1: Media Literacy**

- ) Introduction to Media Literacy.
- ) Introduction to Mass Media.
- ) Audience Theories.
- ) Media Ownership.
- ) Media Representation.
- ) Media & Violence.

**Chapter-2: Aspects of Film Language**

- ) The concept of missing scene.
- ) Film Analysis:
  1. Short film – fiction.
  2. Short film – non-fiction.
  3. Feature film.

**Chapter-3: Content Analysis of TV Programmes**

- ) The concept of a soap opera – Daily soap, Weekly soap, Genres of Soap Opera.
- ) Primary audience of each genre, the segmented nature of the audience.
- ) Gaze of the audience, concept of a flow, continuous interruption.

- ) Culture of Film based programmes.
- ) Culture of Music based programmes.
- ) Educational TV, Non-fiction on TV.

#### **Chapter–4: Content Analysis of Radio programmes**

- ) News- the format, the language, frequency talks, magazine programmes – unidirectional nature.
- ) Feedback with a time phase difference.
- ) Dramas - the unique nature of radio plays.
- ) Interactive programmes-phone in, live interaction, music, experiences, memories as content of these programmes.

#### **Chapter–5: Content Analysis of Newspapers and Periodicals**

##### **Newspapers:**

- ) The macro composition of a daily – various sections like the front page, edit page, sports page, business page.
- ) The micro composition of a daily – proportion of visual and text, language, highlighting.

##### **Periodicals:**

- ) The macro composition of a periodical-various sections like the cover page, cover story, features, columns, business page.
- ) The micro composition of a periodical–proportion of visual and text, language, highlighting.

#### **Chapter–6: Features of the Internet**

- ) **Emails:** Personal, business communication between individuals and organizations, changing characteristics of the same.
- ) **Websites:** Educational sites, Entertainment sites, Information sites, Social networking sites, Business sites.
- ) **Blogs.**
- ) **Web Advertising.**
- ) The changing nature of communication and perception of interpersonal and social communication due to the various developing possibilities of the Internet.

### **Unit–2: Evolution of the Media [Global]**

**24+16**

#### **Chapter–1: The Evolution of International Cinema**

The Silent Era [1895 to 1927].

- ) Primitives and Pioneers in UK, France and USA.
- ) Establishment of Hollywood, D.W Griffith and Slap stick comedy.
- ) Expressionism in Germany.
- ) Socialist Realism in USSR.

The Sound Era [1927 to the present day, transition from black and white to colour].

- ) The British, American and European documentary movement.
- ) Genres in Hollywood.
- ) Neorealism in Italy.

- ) The decade of Classical Cinema 1950-1960.
- ) European Cinema.
- ) Asian Cinema.
- ) African Cinema.
- ) Latin American Cinema.
- ) Post- Globalization– Hollywood and other cinemas.

### **Chapter–2: The Evolution of International Television**

- ) Early beginnings from 1926.
- ) Post World War II.
- ) Commercial transmission- Local networks.
- ) National and trans-national networks.
- ) Live and recorded transmission.
- ) Video and Cable Networks.
- ) Satellite communication.
- ) Evolution of Fiction and Nonfiction programmes.
- ) Television as a part of the Internet.

### **Chapter–3: The Evolution of Print Medium**

- ) Journalism as a 17<sup>th</sup> and 18<sup>th</sup> century phenomenon.
- ) Role of Industrial Revolution in the spread of print media.
- ) Local newspapers, Chain of newspapers.
- ) Some features of Journalism in Europe and America.
- ) On line editions.

### **Chapter–4: The Evolution of Radio**

- ) Technically a combination of wireless and telegraph technology.
- ) Bell, Marconi, Jagdish Chandra Bose, Tesla created the possibilities of transmission.
- ) From Military use to the Civil one in the 1920s.
- ) Establishment of BBC in 1922, also Federal Commission in USA.
- ) News and commercial messages.
- ) By 1940 a universal and round the clock companion.
- ) 1955 onwards the invention of the transistor making radio portable.
- ) National/Regional Network: AM, FM, Stereo Broadcasts.
- ) Radio as a part of web communication.

### **Chapter–5: Evolution of the Internet**

- ) The internet becomes a reality in the 1970s.
- ) Till 1991, internet is limited to the military and industrial circles and is closed to others.
- ) Development of WWW in 1991 opens up internet.
- ) The phenomenal growth after that.

### Unit-3: Convergence of the Media

12+8

#### Chapter-1: Independence and Inter-Convertibility of the Media

- ) Nature of audio-visual signals and messages - Optical/Electronic.
- ) Live/Recorded.
- ) Analogue/Digital.
- ) Nature of media - Print - Text.
- ) Film: Optical Image.
- ) Television: Electronic Image: Radio- wireless communication.
- ) Accommodation of text, sound, image into Film.
- ) Accommodation of Film into Television.
- ) Internet as the meeting point of all the mass media.

#### Chapter-2: Convergence and the New Possibilities of Communication

Earlier models of communication.

- ) Broadcasting.
- ) Mass communication model of a few transmitting to a vast number of receivers.
- ) Gigantic organization.
- ) Huge technical infra-structure.
- ) Large scale revenue.

The changed paradigm due to the Internet.

- ) Empowering an individual to post data on the Internet.
- ) Information, message in one medium triggering off activity in the others.
- ) Many sources of the same information.
- ) Distribution of the information between individuals on an unprecedented global scale.
- ) Rapidity of opinion generation on a local, national and global scale.
- ) The socio-political implications of the new information order.
- ) The strengthening of democracy.

## CLASS-XII ELECTIVE

### THE CREATIVE AND COMMERCIAL PROCESS IN MASS MEDIA (739)

#### THEORY + PRACTICAL

*Time: 3 Hours + 2 Hours*

*Theory: 60 Marks  
Practical: 40 Marks*

#### Unit-1: Graphic Design-Multimedia Applications

**Theory: 30**

##### Chapter-1:

- ) Introduction to multimedia.

##### Chapter-2:

- ) Text.

### **Chapter–3:**

) Still image.

### **Chapter–4:**

) Video Applications.

### **Chapter–5:**

) Sound.

### **Chapter–6:**

) Creating a Multimedia project.

## **Unit–2: Production Skills**

**Practical: 40**

### **Chapter–1:**

) Project Tour of the campus of a training institute with some practical experience/ observation.

### **Chapter–2:**

) Project – Non-Fiction.

## **Unit–3: Selling/Marketing/Exhibiting A Product Through Advertising: The Case Study Approach**

**Theory: 30**

### **Chapter–1: Profile of a Product**

) Product specifications.

) Targeted.

) Buyers.

### **Chapter–2: The Task of Advertising**

) Promotion of product.

) Drive sales.

) Build a brand identity.

) Increase the buzz.

### **Chapter–3: The Available Media**

) Print-newspapers, magazines, brochures, fliers, posters.

) OOH-bill boards kiosks trade shows events.

) Broadcast advertising – Radio TV Digital Internet + Mobile.

) 'In film' promos.

) Celebrity endorsements.

) Cross promotions.

) Merchandise.

) Games (Mobile and computer) Covert advertising.

### **Chapter–4: Forms of Advertising**

) Product Advertising.

- ) Institutional Advertising (Corporate).
- ) Social Service - PSA Advocacy Advertising.
- ) Comparative Advertising Cooperative Advertising Direct Mail.
- ) A Point-of-Purchase Advertising.
- ) Informational Advertising.

### **LIST OF RECOMMENDED BOOKS**

1. Understanding the Evolution of Forms of Mass Media, Class XI, Published by CBSE.
2. The Creative & Commercial Process in Mass Media-I, Class X, Published by CBSE.
3. Understanding the Evolution of Forms of Mass Media, Class XI, Published by CBSE.
4. The Creative & Commercial Process in Mass Media-II, Class XII, Published by CBSE
5. Media and Social Inequality: Innovations in Community Structure Research by John Pollock.
6. Mass Media, An Aging Population, and the Baby Boomers By Michael L. Hilt, Jeremy H. Lipschultz.
7. Media Piracy in Emerging Economies by Joe Karaganis.
8. Broadcasting, Voice, and Accountability by Steve Buckley.
9. Media, Technology, and Society: Theories of Media Evolution by Russell Neuman.

## APPLICATION FORMAT FOR OFFERING VOCATIONAL SUBJECT / COURSES AT SENIOR SECONDARY LEVEL

1. **Name of the Course(s) applied for:** .....  
(with subject codes) .....
  
2. **Name of the School (Complete address)** .....  
(Also provide Website address if available) .....
  
3. **Affiliation No.** .....
4. **School ID.** .....
5. **Name of the Principal** .....
- J Phone No. ....
- J Mobile No. ....
- J E-mail .....
6. **Infrastructure** .....
- No. of Students .....
- No. of Teachers .....
- Student-Teacher Ratio .....
- No. of Classrooms .....
- Books in Library .....
- Total Computers in Computers Labs .....
- Specification of Computers .....
- Details of Constructed area for .....
- Establishing Laboratories .....
7. **Name of Teachers for Vocational Course** .....
- (Qualifications) .....
  
8. **Details of Draft** (in favour of Secretary, CBSE, Payable at Delhi)

DD No.: .....	Date: .....	Amount	(in	Digits)
.....				
Bank Issues: .....		Amount	(in	Words)
.....				

Signature & Seal of the Principal

Note: The document complete in all respects may be sent to: **The Director (Vocational Education), Central Board of Secondary Education 2, Community Center, Preet Vihar, New Delhi-110092.**

