

Annexure No.	41 C
SCAA Dated	29.02.2008

BHARATHIAR UNIVERSITY, COIMBATORE – 641 046.

**PG DIPLOMA IN GARMENT MANUFACTURING TECHNOLOGY
(WITH EFFECT FROM 2007-2008 AND ONWARDS)
(SCHEME OF EXAMINATIONS (REVISED))**

I SEMESTER

PAPER	TITLE OF THE PAPER	HOURS/WEEK		* MAX.MARKS	
		THEORY	PRACTICAL	THEORY	Practical
1.	INTRODUCTION TO TEXTILES	3	2	100	-
2.	FASHION DESIGNING	2	5	-	100
3.	BASIC CONSTRUCTION TECHNIQUE	3	5	-	100
4.	DESIGNING AND CONSTRUCTING CHILDREN'S APPAREL	-	10	-	100

Internship for 15 days in beauty clinic

II SEMESTER

PAPER	TITLE	HOURS / WEEK		* MAX.MARKS	
		THEORY	PRACTICAL	THEORY	Practical
5.	DESIGNING & CONSTRUCTING WOMEN'S APPAREL	-	9	-	100
6.	DESIGNING & CONSTRUCTING MEN'S APPAREL	-	9	-	100
7.	ENTREPRENEURSHIP DEVELOPMENT & EXPORT MANAGEMENT	4	-	100	-
8.	COMPUTER APPLICATION IN GARMENT TECHNOLOGY	2	6	-	100

* INTERNAL ASSESSMENT FOR 25% MARKS

Internship for 15 days in Beauty Clinic and in Garment Manufacturing unit.

**SEMESTER I
PAPER I**

INTRODUCTION TO TEXTILES

UNIT I

Introduction to the field of textiles – classification of fibers Natural and Chemical. Identification of Textile fibers – Microscopic, burning and solubility test.

UNIT II

Spinning - Definition, Objectives of blending, opening, cleaning, carding, combing, drawing, roving, spinning. Sewing threads & its classification.

UNIT - III

Weaving operation – process sequence. Woven – Basic Weaves – Plain, Twill, satin, Fancy weaves – Pile, double cloth, leno, swivel, lappet, dobby and jacquard. Study on non-woven and knitting – definition and classification

UNIT IV

Wet processing: Preparatory process – Singeing desizing, Scouring, Wool carbonizing, Synthetic heat setting, Weighting of silk, Mercerization – methods. Bleaching – definition, types.

UNIT V

Dyeing and Printing: Dyeing – types and methods of dyeing, Printing – Styles of Printing – Direct, discharge and resist styles.

REFERENCES:

1. Textiles – Fiber to Fabric, Corbman, B.P. International Students Edition, Mc.Graw Hill Book Co Singapore (1985).
2. Fabric Science, 5th edition, Joseph.J.P. et.al. Fairchild Publications, New York (1990).
3. Textile Chemistry, Peters.R.H. Vol I,II, Textile Institute Manchester 1970.
4. Technology of Textile Processing, Shenai.V.A. Vol I, II, V, VII, Sevak Publications, Bombay 1981.
5. Beginner's guide to fabric dyeing and printing, Stuart and Robinson.P. Technical books Ltd, London (1982).

JOURNALS:

1. Colourage, Colour Publications, Bombay.
2. Textile dyer and printer
3. Clothesline, Media and marketing association, Bombay.
4. Apparel the clothers Digest, Bombay.

INTRODUCTION TO TEXTILES

Practical:

1. Identification of textile fibers
2. Identification of Twist in yarn
3. Fabric count – Warp/Weft per inch
4. Fabric Weight – Grams per square meter
5. Preparation of samples for processing – Desizing scouring, bleaching
6. Dyeing – Direct, Reactive, Naphthol, Acid & Basic
7. Preparation of printing sample for Tie and Dye, Batik, Stencil and Block.

SEMESTER – I PAPER - II FASHION DESIGNING

UNIT – I

Design – Definition , Types- Structural Design and decorative design , Types of designs – natural, stylized, geometrical, and abstract.

UNIT – II

Elements of design – Line Shape, color, size & Texture, Art & Principle-Balance, Rhythm, emphasis, harmony & proportion

UNIT – III

Color, color theories, prang & Munscll, Dimensions of color- Hue value & intensity, color scheme and texture

UNIT –IV

Trimmings & decoration – Definition and Types. Figure irregularities. Wardrobe planning

UNIT – V

Design development and adjustment. Selection of design for end uses.

REFERENCES:

1. Elements of fashion & apparel design
2. 'Fashion sketch book' written & illustrated by Bina Abling, Fair child publications, NewYork
3. 'Wardrobe strategies for women' by Judith Rasband, Delmar publishers, London.
4. 'Fundamentals of Textiles and their care' by susheela Dantyagi, 5th edition, published by Orient Longman Ltd., New Delhi.
5. 'Inside the fashion business' 4th edition by Jeannette A.Jarnow, Mirianr Guerreiro & Beatrice Judelle, Mac Millan Publishing Company, NewYork
6. Mc Jimsoy & Harriet 'Art & Fashion in clothing selection' , Liowa State University Press, Iowa

PRINCIPLES OF DESIGN AND APPLICATION – PRACTICALS

1. Drawing Diagrams or samples for the following

- a. Application of principles of design in dress design
- b. Prang color chart
- c. Value chart
- d. Intensity chart
- e. Standard color harmonies

2. Preparing samples for surface trimmings

3. Drawing diagrams for persons who have unusual problems in dress.

1. Design development for various end uses & application of color

SEMESTER – I PAPER – III

BASIC CONSTRUCTION TECHNIQUE

UNIT - I

The sewing machine – machine accessories essential equipments. Grain: Types, importance of grain in cutting, bias preparation of fabric for cutting. Preparation of samples for basic seams and seam finishes. Preparation of samples for Hemming top stitched hem, zig zag finish, tuned and stitched finish, sound hem finish.

UNIT II

Preparation of samples for Fullness darts – single and double pointed darts, tucks – pintuck, cross tuck, group tuck. Pleats – Knife pleat, box pleat, inverted pleat. Flares and godets. Gathers and shirring, ruffles – single, double, circular. Preparation of samples for Facings and bindings.

UNIT III

Preparation of samples for plackets and closures – continuous bound placket, two piece placket, zipper placket, tailored placket. Closures – definition, types – conspicuous (button holes, shapes, shank buttons, and loop eyelets and cords) Inconspicuous: (press buttons, hooks and eyes, lapped zipper, heavy duty hook and eyes)

UNIT IV

Preparation of samples for sleeves and yokes – sleeves – plain sleeve, puff sleeve (variation), Sleeveless styles, ranglon, kimono styles Yokes – types – simple yoke with fullness, midriff yoke – partial yoke.

UNIT V

Preparation of samples for collars and pockets – collars, – flat collar, Peter Pan collar, standing collar (Chinese collar and turtle neck collar) full shirt collar, shawl collar. Pockets – patch pocket, bound pocket, pocket in a seam, front hip pocket.

REFERENCES:

1. Singer sewing essentials – (Cyde cosse incorporated Minnesota (1997)
2. Practical clothing construction I & II – Mary Mathews, Cosmic Press, Chennai (1986)
3. The Complete book of Sewing – Dorling Kindersley, Dorling Kindersley Ltd., London (1996).
4. Sewing and knitting – A Readers Digest - step by step guide, Readers Digest Pvt Ltd., Australia (1993)

SEMESTER – I PAPER IV

DESIGNING & CONSTRUCTING CHILDREN'S APPAREL

Embroidery

- Hand Embroidery and Machine Embroidery
- Different types of Stitches.

Designing, Drafting and constructing

1. Bib Variation in outline shape.
2. Panty – Plain or plastic lined panty
3. Jabla – with or without sleeve with or without opening
4. Knicker – Elastic waist, without opening with elastic at thighs
5. Baba suit - Knicker with chest piece attached with straps.
6. A – Line petticoat with double pointed dart and other variations.
7. Summer frock - without sleeves & collars, suspenders tied at shoulder
8. Yoke Frock – with sleeve, with yoke, gathered or umbrella skirt, with or without collar.

REFERENCES:

1. Easy way of making chollis children's garments and also Indian style dresses, Krishna Rao Kumar, Noveno offset printing Co, Mebrad (1993).
2. Practicals cutting and tailoring part – 2 Esherwari Anwani, Lakharaj Hane: R.B Publications, New Delhi.
3. Zarapkar system of cutting: Zarapkar and Aravind K. Zarapler Navaneet Publication (India) Ltd, Mumbai.
4. Practical clothing construction – I and II Mary Mathews Cosmic press Chennai (1986).

SEMESTER – II PAPER V**DESIGNING & CONSTRUCTING WOMEN’S APPAREL – PRACTICAL**

Preparation of paper pattern for all garments and constructing the same

1. Sari Petticoat - Six gored Skirt
2. Middi - Four panel
3. Middi Top - Fancy
4. Churidhar - Modern churidhar
5. Salwar & Kameez - Modern
6. Blouse - Fancy
7. Ladies Pant - Modern Pant
8. Night Dress - Nightee with Yoke

REFERENCE:

1. Mary Mathew: Practical Clothing Construction (I,II,III)
2. K.R.Zarapkar: Zarapkar system of cutting, Navneet Publications Ltd.,Bombay/Nagpur.
3. K.M.Hedge: Scientific Garment Cutting, Hedge Tailoring College, Poona.

SEMESTER – II – PAPER VI**DESIGNING & CONSTRUCTING MEN’S APPAREL**

Topics	Course Outline	Theory learning outcomes
S.B.VEST	a. Without collar b.Button attaches c,No sleeve	*Learning the sequence of measurements required. *Sequence of steps involved in designing and drafting pattern and sequence of steps involved in constructing garment. *Finding out the suitable cloth required for garments and layout method and direct measurement method *Working out the cost of garment
Slack Shirt	a. Collar b.Patch pocket	
Narrow Pant	a. Narrow botton b.Hib Pocket c.Pleatless	
a.Kalidhar kurta	a.Kali Piece b.Side pocket c.Round neck d.Half open	
b.Nehru kurta	a.Half open b.stand collar c.full sleve	
a.pyjama	a.Elastic/Tape attached	
b.Night Dress	a.Round neck b.Overlab c.Tape attaches	

REFERENCE:

1. Scientific Garment Cutting by: K.M.Hedge.and song Pvt.Ltd, No.43 Somuvar Poona – 411011.
2. Easy writing 2 by juvekar commercial Tailors Corporation Pvt Ltd 166,Dr.Ambedhkar Road, Dadar.
3. Dress Making by Smt.Thangam Subramaniam, Bombay Tailoring and Embroidery college, 32, North Park St,
4. Zarpkar system of cutting by K.R.Zarpkar, Navnet publications Ltd., Bombay/Nagpur.

**SEMESTER – II – PAPER VII
ENTREPRENEURSHIP DEVELOPMENT &
EXPORT MANAGEMENT**

UNIT – I

Definition of entrepreneur – Functions – Types. Concept of women entrepreneur – Functions and problems. Recent trends and development in women entrepreneurship.

UNIT –II

Project identification- Classification. Project formulation- Feasibility analysis. Project report. Selection. Project appraisal – Concept, Methods – cash flows ,Pay back period,ARR. Methods of minimizing risk.

UNIT –III

Steps for starting a small scale enterprise – Steps to be taken. Preparation of Project report – Guidelines. Procedure and formalities for registration. Selection of types of organization – Sole proprietorship. Partnership. Joint stock company. Factors influencing the choice of organization.

UNIT – IV

Institutional finance to entrepreneurs – Commercial Banks . Other financial Institutions – IDBI, IFCI, ICICI, IRBI, LIC, UTI, SIDC, SIDBI, EXIM Bank.

UNIT – V

Institutional support to entrepreneurs – Need for support – NSIC, SIDO, SSIDC, SISI , SFC, DIC, TCO, THIC, Kadhi and Village Industries Commission, Industrial Estates. Introduction to TQM & ISO . WTO and its role in textile industry.

REFERENCES:

1. Entrepreneurship development - C.B. Gupta & N.P. Srinivasan
2. Entrepreneurship development - S. Khanka
3. Projects –Planning,Analysis,Selection,Implementation & Review - Prasanna Chandra

**SEMESTER II
PAPER VIII**

COMPUTER APPLICATION IN GARMENT TECHNOLOGY

UNIT I

Classification of computers, computer generations, computer specification, organization of computer sections. Types of storage devices (primary and secondary), input devices, output devices.

UNIT II

Role of Computers in Fashion Industry - Information flow - CAD, CAM, CIM, CAA, PDC – Definition and functions, Computers in production planning and production scheduling, computerized colour matching system

UNIT III

CAD in designing
Textile designing – weaving, knitting and printing
Creating embroidery designs
Garment designing – 2D and 3D forms

UNIT IV

CAD in pattern making and grading – system description – information flow – process involved in pattern making, process involved in pattern grading.

UNIT V

Computer application in fabric defect checking, laying / spreading, cutting marker planning, labeling – parts and functions. Computerised sewing machines.

REFERENCE:

1. Clothing Technology – Hannelore Eberle et –al, Verlaag Europa – Lehrmittel, Vollmer Gmbh & Co 4287, Haan – Gruilen
2. Computer Fundamentals – P K Sinha, BPB Publications, Delhi (1992)
3. The Technology of Clothing Manufacture – Harold Carr and Barbara Latham, Blackwell Ltd (1994)
4. Pattern Grading for Women's Clothes, The Technology of Sizing – Gerry Cooklin, Blackwell Science Ltd (1990)

**COMPUTER APPLICATION IN GARMENT TECHNOLOGY
PRACTICALS**

Create the following designs

1. Motifs / small Designs

Embroidery Designs for Kerchiefs, Necklines

Chest prints for T-Shirt

2. Children's Garments

Jabla – different styles

Frocks - different styles

Middi & tops - different styles

3. Women's Garments

Churidhar - different styles

Full gowns - different styles

Middi & tops - different styles

Princess line Dress - different styles

House coats, Aprons, Nighties

4. Men's Garments

S B Vest

T-Shirt - different styles

Shirts - different styles

Kurta Pyjama - different styles

5. Grade the ABOVE patterns

6. Scan designs from books / magazines / photos and edit the designs – colour or features or back ground etc., or add details like ornaments and accessories

MODEL QUESTION PAPERS

INTRODUCTION TO TEXTILES

Time 3hrs

Max marks : 75

SECTION - A (10 x 1= 10marks)

1. ----- is a vegetable fiber.
a) Rayon b) silk c) jute d) glass
2. Opening and cleaning is done in -----.
3. Synthetic fibers are usually spun by ----- method.
4. Initial process of arranging the fibers in a parallel fashion is known as -----.
5. ----- is the method of inserting filling yarns through the shed.
a) taking up b) shedding c) picking d) none
6. The plain weave is sometimes referred to as----- weave.
7. Mercerization of yarn is generally done in ----- stage.
a) After scouring b) after bleaching c) after desizing d) grey state.
8. Fibers are directly converted to fabric in -----.
a) Knitting b) weaving c) non woven d) spinning
9. ----- is the process done to remove size from the grey fabric which is applied during weaving.
10. Tie and dye and batik are ----- styles of printing.

SECTION - B (5x 5 = 25 Marks)

11. a How will you identify wool and silk by microscopic test. (OR)
b. How will you identify jute and cotton by microscopic test?
12. a. Write notes on the process involved in the blow room. (OR)
b. What are the objectives of carding?
13. a. Write notes on plain, twill and satin weaves. (OR)
b. Differentiate the process of weaving and knitting.
14. a What are the objectives of bleaching ? Explain the process. (OR)
b. Write note on Singeing.
15. a. Write notes on stencil printing. (OR)
b. Write notes on batik printing.

SECTION – C (5 x 8 = 40 Marks)

16. a. Classify natural and man made fibers. (OR)
b. Explain the burning tests for natural fibers and man made fibres..

17. a. Write notes on mechanical spinning process. (OR)
b. Write notes on sewing threads and its classification.
18. a. Explain the manufacturing process of a fabric. (OR)
b. Write notes on knitting and its classification.
19. a. Write notes on desizing and weighting of silk. (OR)
b. Write notes on mercerization.
20. a. Write notes on different styles of printing. (OR)
b. Write notes on dyeing and its types.

ENTREPRENEURSHIP DEVELOPMENT

MAX.MARKS:75

TIME: 3HRS

Section-A(10x1=10)

Answer all the questions

1. Discovery of new ideas, new articles and new methods is referred to as
a. innovation b. invention c. research d. experimentation
2. Who is a first generation entrepreneur?
a. one who ventures into entrepreneurship for the first time
b. one who has professional expertise c. an elderly entrepreneur
d. an entrepreneur hailing from upper class of the society
3. Ariel is planning to set up a unit for producing shoes. This is an example for
a. an expansion project b. an diversification project c. R&D project
d. modernization project
4. _____ is one of the stages in the process of project formulation
a. feasibility analysis b. communication analysis c. manufacturing analysis d. none
5. ICICI was established in the year _____
a. 1955 b. 1954 c. 1953 d. 1950
6. IRBI has been renamed as _____
a. Industrial Reconstruction board of India b. Industrial Investment bank of India
c. Industrial Refinance bank of India d. Industrial rehabilitation bank of India
7. Liquidity ratio helps to analyse
a. credit worthiness of the project b. debt servicing capacity of the unit
c. over all profitability of the unit d. short term financial position of the unit
8. Expand NSIC
a. National State Industries Corporation b. National Small Industries Corporation
c. National State Investment Centre d. National State Investment Corporation
9. _____ is the function of DIC.

a. identification of entrepreneurs b. sick units rehabilitation c. incentives d. concession

10. Identify the Institution which is not concerned with SSI

a. SIPCOT b. SISI c. SSIC d. SIDO

Section B (5x5=25)

Answer all the questions

11. a. Distinguish between innovation & Invention.

or

b. What are the types of women entrepreneur?

12. a. What are the sources of project identification?

or

b. Give the features of Payback period method.

13. a. What are the salient features of a partnership firm?

Or

b. What are the salient features of a joint stock company?

14. a. Write the functions of SIDBI.

or

b. What are the functions of IRBI?

15. a. Write the role of SISI in promoting SSI.

or

a. What is the role of SIDO?

Section - C (5x8=40)

Answer all the questions

16. a. Discuss the role of women entrepreneur in the economic development of a country.

or

b. What are the problems faced by Women Entrepreneurs?

17. a. Explain in brief the elements of project formulation.

or

b. State the various project appraisal methods.

18. a. Describe the various steps to be taken by an entrepreneur to start a small industry.

Or

b. How will you choose the most appropriate form of entrepreneurial organization for your business?

19. a. State the role of Commercial Banks in Entrepreneurship development.

or

b. Explain the role played by DIC in promoting industries.

20. a. State the functions of KVIC & SFC.

or

b. Explain WTO & its role in textile industry.