

B.Sc. Home Science Apparel & Textile Design (2020-21)

SEMESTER-V

Sr. No.	Paper/Subject	Credit Hours			Theory Marks			Practical Marks			Total
		Th.	Pr.	Total	Paper	Int. Ass.	Total	Paper	Int. Ass.	Total	
1	Computer Aided Design-I	-	4	4	-	-	-	50	50	100	100
2	*Traditional Embroideries (Common to ATD and Composite)	3	2	5	40	10	50	25	25	50	100
3	Fashion Concepts and Illustration	3	2	5	40	10	50	25	25	50	100
4	Textile Design	3	2	5	40	10	50	25	25	50	100
5	Apparel Design and Construction	-	6	6	-	-	-	50	50	100	100
6	**Economics and Entrepreneurship Development.	2	2	4	40	10	50	25	25	50	100
7	**Extension Education-I	2	2	4	40	10	50	25	25	50	100
	TOTAL			33							700

Note: *Subject "Traditional Embroideries" is common B.Sc. H.Sc. Apparel and Textile Design & Composite (Semester 5th).

** Subject "Economic and Entrepreneurship Development" and "Extension Education" is common to all streams

B.Sc. Home Science Apparel & Textile Design (Semester-V)
COMPUTER AIDED DESIGN -I
(PRACTICAL)

Credit Hrs.: 4/week

Exam Hrs.: 3

Maximum Marks: 100

Paper: 50

Internal Assessment: 50

Instructions to paper setters:

There will be 3 questions in all. The question paper should cover the entire syllabus.

Objectives:

To acquaint students with the tools of Paint and Corel Draw.

CONTENTS

- 1. Detailed study of Paint and Corel Draw tools.**
- 2. Creating Nursery, Geometrical and Floral Motifs.**
- 3. Designing of Top with different types of Collars-Peter pan, Cape, Sailor and Chinese Band.**
- 4. Designing of Top with different types of Sleeves-Puff, Magyar, Raglan and Bell.**
- 5. Designing of different types of Skirts- Flared, Gored, Tiered and Gathered with Yokes.**

Recommended Readings:

- 1. Corel Draw by BPB publication.**
- 2. Corel Draw X4 in simple steps-Dream tech press.**
- 3. User Guide for the Software(Corel draw)**

B.Sc. Home Science Apparel & Textile Design (Semester-V)
TRADITIONAL EMBROIDERIES
(THEORY)
(COMMON TO COMPOSITE & APPAREL AND TEXTILE DESIGN)

Credit Hrs.: 3/week

Maximum Marks: 50

Exam Hrs.: 3

Paper: 40

Internal Assessment: 10

Instructions to paper setters:

1. There will be total nine questions carrying equal marks
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions from the whole syllabus
3. Five questions will be attempted in all, selecting one question from each section and the compulsory question.

Objectives:

1. To impart knowledge of various motifs, colours and designs used in Traditional embroideries of India.
2. To impart knowledge of stitches and techniques used in traditional embroideries of India.

(To study the following traditional embroideries of India with special reference to history, fabrics, motifs, colours, threads and stitches used)

UNIT- I

1. Phulkari of Punjab
2. ChambaRumal of Himachal Pradesh

UNIT- II

3. Kashida of Kashmir
4. Chikankari of Uttar Pradesh

UNIT- III

5. Kutch Embroidery of Gujarat
6. Sindhi and Kathiawar Embroidery
7. Manipuri Embroidery

UNIT- IV

8. Kantha of Bengal
9. Kasuti of Karnataka

Recommended Readings:

- 1. Saraf D.N, "Indian Crafts", Vikas Publishing House Pvt. Ltd. 1982**
- 2. NaikShailaja D, "Traditional Embroideries of India", APH Pub. Corp, New Delhi, 1996**
- 3. Paine Sherla, "Embroidered Textiles", Thames and Hudson Ltd, 1990**
- 4. Chattopadhyay K, "Indian Embroidery", Wiley Eastern Ltd., New Delhi, 1977.**
- 5. Marrel A, "The techniques of Indian Embroidery", B.T. Batsford, London, 1992.**
- 6. Mehta J. Rustom, "Master pieces of Indian Textiles", D.B.Taraporevala, Bombay (1970).**
- 7. Chattopadhyay k., "Handicrafts and Industrial Arts of India", Taraporevala sons & co. Pvt. Ltd.Mumbai, 1960.**
- 8. Pandit S., "Indian Embroidery- its variegated charms" ,Vinubhai Patel Baroda, 1976.**
- 9. Gillow John & Barnard Nicholas, "Traditional Indian Textiles", Thames & Hudson Ltd. London (1991)**
- 10. Webb M, "Embroidery Stitches", Bounty Books London, 2006.**
- 11. Eaton J, "The Complete stitch Encyclopedia", Quantum Publishing Ltd., 2004.**

B.Sc. Home Science Apparel & Textile Design (Semester-V)
TRADITIONAL EMBROIDERIES
(PRACTICAL)
(COMMON TO COMPOSITE & APPAREL AND TEXTILE DESIGN)

Credit Hrs. 2/week
Exam Hrs. 3

Maximum Marks: 50
Paper: 25
Internal Assessment:25

Instructions to paper setters:

1. There will be two questions in all covering Topic I and Topic II

Objectives:

1. To learn basic embroidery stitches
 2. To acquaint the students with the different fabrics, stitches, motifs and colours used in traditional embroideries.
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1. Making samples of the basic embroidery stitches- Running, Stem, Chain, Back, Open chain, Blanket, Feather, Herring bone, Close herring bone, Couching, Lazy daisy, French knot, Satin, long and short, Romanian, Fly, Bullion, Chevron and Cross stitch.
 2. Making Samples of the following traditional embroideries
 - a) Phulkari of Punjab
 - b) Chikankari of Uttar Pradesh
 - c) Kutch Embroidery of Gujarat
 - d) Sindhi Embroidery
 - e) Kantha of Bengal
 - f) Kasuti of Karnataka
 3. Project Work: To design and embroider an article by using any one or more of the above mentioned traditional embroideries.

Recommended Readings:

1. Simpson J ,”Embroidery” , Octopus Books Ltd., London, 1977.
2. Webb M, “Embroidery Stitches”, Bounty Books London, 2006.
3. Eaton J, “The Complete stitch Encyclopedia” , Quantum Publishing Ltd., 2004.
4. Griffiths A, “ An Introduction to Embroidery” , Grange Books London, 1995.
5. The Big Book of Needle Craft by Obhmas.
6. Amanda N, Needle work and Sewing Tech. Grange Books, Grange Yard,London, 1991.
7. Pandit S., “Indian Embroidery- its variegated charms” ,Vinubhai Patel Baroda, 1976.
8. Mehta J. Rustom, Master pieces of Indian Textiles, D.B.Taraporevala, Bombay (1970).
9. ChattopadhyayK., “Handicrafts and Industrial Arts of India”, Taraporevala sons & co. Pvt. Ltd.Mumbai, 1960.
10. Gillow John & Barnard Nicholas, “Traditional Indian Textiles”, Thames & Hudson Ltd. London (1991)

B.Sc. Home Science Apparel & Textile Design (Semester-V)
FASHION CONCEPTS AND ILLUSTRATION
(THEORY)

Credit Hrs. 3/week
Exam Hrs. 3

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Instructions to paper setters:

1. There will be total nine questions carrying equal marks
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions from the whole syllabus
3. Five questions will be attempted in all, selecting one question from each section and the compulsory question.

Objectives:

To impart knowledge of

1. Fashion terms
2. Fashion movements
3. Fashion adoption
4. Fashion illustration

UNIT-I

1. Fashion terminology – Fashion, Style, Fad, Classic, Taste, Haute Couture, Pret-a-Porter.
2. Fashion:
 - a) Principles
 - b) Components-Silhouettes, Colour, Texture, Details

UNIT-II

3. Factors influencing fashion movement
 - i) Accelerating factors
 - a) Widespread Buying Power
 - b) Leisure Time
 - c) Increased Education
 - d) Improved Status of Women
 - e) Technological Advances
 - f) Sales Promotion
 - g) Seasonal Change
 - ii) Retarding factors
 - a) Habit and custom
 - b) Religion
 - c) Sumptuary laws
 - d) Reduction in consumer's buying power
4. Fashion Cycle:
 - a) Stages of fashion cycle
 - b) Length of fashion cycle-Long run, Short run.
 - c) Broken Fashion cycle.

UNIT-III

5. Fashion Theories:
 - a) Trickle-down theory
 - b) Trickle across theory
 - c) Bottom-up theory

6. Sources of inspiration
 - a) Historical and ethnic costumes
 - b) Fabrics
 - c) Theatre
 - d) Nature
 - e) Art & Architecture
 - f) Folk art
 - g) Magazines and books
 - h) Museums
 - i) Travel
 - j) Street scene
 - k) Awareness

UNIT-IV

7. Sketching terminology-croqui, block figure, rendering, art supplies for drawing, spec-sheet, layout, flat sketch, fashion drawing.
8. Historical perspective of Fashion Illustration (before the first world war to beginning of new millennium).
9. Scope of Fashion Illustration.

Recommended readings:

1. McKelvey, Kathryn & Munslow, Janine, "Illustrating Fashion", Blackwell Publishing Co. USA, 2007.
2. Abling, Bina, "Fashion Sketchbook", Om Book International, New Delhi, 2005.
3. Kathryn McKelvey, "Fashion Source Book", Om Book International, New Delhi, 2005.
4. Ireland, Patrick J, "Fashion Design Drawing & Presentation", Om Book International, New Delhi, 2005.
5. Frings, Gini Stephens, "Fashion from Concept to Consumer" New Jersey, Prentice Hall-C, 1996.
6. Greenwood, Kathryn Moore and Murphy, Mary Fox, "Fashion Innovation & Marketing" Mac Millian Publishing Co., New York, 1978.
7. Bevin, Marjorie Elliotte, "Design through discovery", Holt, Rinehart and Winston, Inc., 1963.
8. Lee, Sharon, "Inside fashion design", Pearson Hall, 2004.
9. Stone, Elaine, "In Fashion", Fairchild Books, 2012.
10. Fogg, Marne, "Illustrating Fashion bazaar 1930-1970" Batsford, 2011.
11. Troxelle & Judelle, Fashion Merchandising.

B.Sc. Home Science Apparel & Textile Design (Semester-V)
FASHION CONCEPTS AND ILLUSTRATION
(PRACTICAL)

Credit Hrs. 2/week

Exam Hrs. 3

Maximum Marks: 50

Paper: 25

Internal Assessment: 25

Instructions to paper setters:

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.

Objectives:

To impart knowledge of

1. Figure drawing
 2. Illustration of garment details
 3. Rendering different textures
 4. Sketching of fashion accessories
-
1. Fashion figure (Croqui & Block Figure)
 - a) Eight, ten and twelve head figure.
 - b) Fleshing of fashion figure.
 - c) Drawing of hair & hairstyles.
 2. Rendering different textures-Denim, Fur, Net, Hosiery, Chikan, Satin
 3. Sketching of various fashion details
 - a) Silhouettes
 - b) Gathers, Pleats & Tucks
 - c) Frills & Flounces
 4. Sketching of accessories-Handbags, Footwear & Jewellery
 5. Design and illustrate the following:
 - a) Ethnic wear-Salwar Kameez, Saree Blouse, Lehnga Choli
 - b) Western wear-Skirt Top, One- Piece Dress, Evening Gown, Trouser-shirt

Recommended Readings:

1. Ireland, Patrick J, "Fashion Design drawing & Presentation", Om Book International, 2005.
2. Mckelvey, Kathryn & Munslow, Janine , "Illustrating Fashion", Blackwell, 1999.
3. Abling, Bina, "Fashion Sketchbook" , Om Book International, New Delhi, 2005.
4. McKelvey, Kathryn, "Fashion Source Book", Om Book International, New Delhi, 2005.
5. Ireland Patrick J, "Fashion Design Drawing & Presentation", Om Book International, New Delhi, 2005.

B.Sc. Home Science Apparel & Textile Design (Semester-V)
TEXTILE DESIGN
(THEORY)

Credit Hrs. 3/week
Exam Hrs. 3

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Instructions to paper setters:

1. There will be total nine questions carrying equal marks
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions from the whole syllabus
3. Five questions will be attempted in all, selecting one question from each section and the compulsory question.

Objectives:

To acquaint students with:

1. Elements of art & Principles of design and their applications
2. Different types of thickening agents, dyeing and printing techniques.
3. Defects and after-treatments of dyed and printed goods

UNIT-I

Study of various elements and principles of design with special reference to Apparel and Textiles

1. Elements of Art
 - a) Line
 - b) Form
 - c) Colour & its dimensions (Hue, Value, Intensity)
 - d) Colour schemes
 - e) Texture
2. Principles of Design
 - a) Harmony
 - b) Proportion
 - c) Balance
 - d) Rhythm
 - e) Emphasis

UNIT-II

3. Preparation of fabric before Dyeing and Printing
4. Dyes :
 - a) Terminology : Dyes, Dyeing, Pigment, Dye-Bath, Material Liquor Ratio, Mordant, Auxilliaries and Color-fastness
 - b) Classification of Dyes
 - c) Stages of Dyeing
 - d) Methods of Dyeing

UNIT-III

5. Techniques of Printing:
 - a) Block Printing
 - b) Screen Printing
 - c) Stencil Printing
 - d) Roller Printing

UNIT-IV

6. Thickening agents : types and uses
7. Post treatment of dyed and printed goods.
8. Defects of dyed and printed goods.

Note: A visit to Dyeing and Printing units to acquaint students with latest techniques of dyeing and printing.

Recommended Readings:

1. Mary Kefgan, "Individuality in Clothing selection-" Macmillan Publishing Company, New York, 1981
2. JernerGawne, "Dress- The Clothing Text book", C.A. Benett Co., 1969
3. Hollen Saddler, "Textiles" Macmillan Publishing Company , New York
4. Phyllis Tortora, "Understanding Textiles", Prentice Hall Inc., New Jersey
5. Majorie Elliot Bevlin, Halt, Rinchart and Winston, "Design through discovery", Inc., USA
6. Sharon Lee Tate, "Inside Fashion Design", Pearson Edu Inc., India
7. Jay Diamond, Ellen Diamond, "Fashion Apparel and Accessories and Home Furnishings", Pearson Edu Inc., India
8. VeenaGandotra, ManeeshaShukul, NeerjaJaiswal, "Introduction to Interior Design and Decoration" Dominant Publishers, 2010
9. PremlataMullick, "Textbook of Textile Design", Kalyani Publishers, 2006
10. W. Clarke, "An Introduction to Textile Printing", Butterworth and Co. Publishing Limited, 1974
11. Sulahria Diamond, "Inside Design", A department of Harper and Row Publishers Inc., NewYork , 1977
12. Jenny Udale , "Textile and Fashion" , Bloomsbury Publishing, UK, 1988
13. Allan Smith, "Fabric Printing", Frederick Warne and Co. Ltd., London, 1953
14. Hamlyn, Mc Calls, "Sewing in Colors", Hamlyn Publishing Group Limited, 1964

B.Sc. Home Science Apparel & Textile Design (Semester-V)
TEXTILE DESIGN
(PRACTICAL)

Credit Hrs. 2/week
Exam Hrs. 3

Maximum Marks: 50
Paper: 25
Internal Assessment: 25

Instructions to paper setters:

1. There will be two questions in all
2. The question paper should cover the entire syllabus

Objectives:

To acquaint students with:

1. different types of lines, shapes and textures.
 2. colour wheel and colour schemes.
 3. motif and its various types.
1. Sketching of different types of
 - a) Lines
 - b) Shapes
 2. Colour-
 - a) Colour wheel
 - b) Color Schemes
 - c) Tints and Shades
 - d) Grey Scale
 3. Creating textures using different mediums : thread pulling, stencil spray, ink drop, blowing of colors and inks, marbling, rubbing, pencils, crayons, rubber and candles
 4. Development of motif: Geometrical, Natural, Stylized and Abstract
 5. Development of design through different placements: Straight repeat (all-over), half drop, tile or brick, repeat mirrored vertically and horizontally.
 6. Development of two different theme-based designs each for apparel and household articles in two colorways

Recommended Readings:

1. Simon Clarke, "Textile Design", Laurence King Publishing Limited, London 2011
2. Textile Design-II, Graphic-sha-Publishing Co. Ltd., Tokyo, Japan, 1977
3. A. Wynne, "Textiles" , Macmillan Education Limited, London, 1997
4. Joost van Roojen, "Water Color Patterns", The Peplin Press, The Netherland, 2005
5. Mary Kefgan, "Individuality in Clothing selection" Macmillian Publishing Company , New York, 1981
6. JerneGawne , "Dress- The Clothing Text book", C.A. Benett Co., 1969
7. Majorie Elliot Bevin, Halt, Rinchart and Winston, "Design through discovery", Inc., USA

8. Sharon Lee Tate, "Inside Fashion Design", , Pearson Edu Inc., India
9. Jay Diamond, Ellen Diamond, "Fashion Apparel and Accessories and Home Furnishings" , Pearson Edu Inc., India
10. Veena Gandotra, Maneesha Shukul, Neerja Jaiswal, "Introduction to Interior Design and Decoration" Dominant Publishers, 2010
11. Premlata Mullick, "Textbook of Textile Design", Kalyani Publishers, 2006
12. Jenny Udale, "Textile and Fashion" , Bloomsbury Publishing, UK, 1988
13. Sulahria Diamond, "Inside Design", A department of Harper and Row Publishers Inc., New York, 1977

B.Sc. Home Science Apparel & Textile Design (Semester-V)
APPAREL DESIGN & CONSTRUCTION
(PRACTICAL)

Credit Hrs. 6/week

Maximum Marks:100

Exam Hrs. 3

Paper:50

Internal Assessment: 50

Instructions to paper setters:

1. Examiner is required to give any one garment for drafting & construction from the syllabus.

Objectives:

To enable the students to:-

1. Design the garments.
 2. Style read the design.
 3. Construct the garments.
-
1. Designing and style reading of the following
 - a) Saree blouse
 - b) Top/ Kurti
 - c) Ladies suit
 - d) Skirt
 2. Drafting of the following:
 - a) Adult's Bodice Block and Sleeve Block.
 - b) Basic Skirt Block
 3. Pattern Development and Construction of the following:
 - a) Saree blouse
 - b) Gored Skirt
 - c) Top/ Kurti

Recommended Readings:

1. Aldrich.W, "Metric Pattern Cutting for Women's Wear" 5th edition, Blackwell publishing Ltd, Oxford.
2. Armstrong.H.J, "Pattern Making for fashion design" Dorling Kinderslay India Pvt Ltd.
3. Bray.N, "More Dress PatternDesign", Blackwell publishing Ltd, Oxford.
4. Watkins.C, "Designer Clothes to Make", William Collins Sons &Co.Ltd. London.
5. Shoben.M.M and Ward.P.J, "Pattern Cutting and Making up", Heinemann professional publishing Ltd, Oxford.
6. Margolis.A.P, "How to design your own dress pattern", Mills and Boon, London.
7. Colton, V. (1987) Complete Guide to Sewing by Reader's Digest.
8. Mc Calls. (1972) Sewing in Colour, Hamlyn.
9. Zarapakar system of Cutting, Navneet Publications.
10. Latest Design Magazines: Hurley's, Venus Collection.

B.Sc. Home Science Apparel & Textile Design (Semester-V)
Economics and Entrepreneurship Development-I
(Theory)
(Common to all)

Credit Hrs. : 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper: 40

Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To prepare the platform where the students view entrepreneurship and self-employment as a desirable and feasible career option.
2. Stimulating the potential to develop entrepreneurial orientation through innovation and creativity
3. To orient the students with basic principles involved in starting and managing a new enterprise

Unit-I

1. Entrepreneurial economics:

Need and importance
Entrepreneurship and enterprise

2. Entrepreneurship and role in economic development

Intrapreneurship and its importance

Unit-II

3. Entrepreneurial Behaviour:

Types of an entrepreneur
Entrepreneurial traits

4. Entrepreneurial Motivation

Types and importance of motivation

Various motivating factors

Unit-III

5. Women entrepreneurs:

characteristics

role and challenges faced during creation and enterprise management

6. Avenues for the growth of women entrepreneurs.

Unit-IV

7. Business Idea/Plan:

Pitching a business idea and its formulation.

Difference between Start ups and Small business.

8. Intellectual Property Rights (Creation-Protection-Encashing).

- 1. Gupta C.B and Srinivisan N.P, “ Entrepreneurial Development” Sultan Chand and Sons, New Delhi**
- 2. Khanna S.S, “Entrepreneurship Development” Sultan Chand and Sons, New Delhi**
- 3. Patel, V. G., “The Seven Business Crises and How to Beat Them” Tata-McGraw, New Delhi, 1995.**
- 4. SIDBI Report on Small Scale Industries Sector (Latest Editions)**
- 5. Taneja, Satish and Gupta, S.L, “ Entrepreneurship Development-New Venture Creating” Galgotia Publishing House, New Delhi, Latest Edition**
- 6. Arora Renu and S.K Sood, “Fundamentals of entrepreneurship and Small business” Kalyani publishers.**

B.Sc. Home Science Apparel & Textile Design (Semester-V)
Economics and Entrepreneurship Development-I
(Practical)
(Common to all)

Credit Hrs.: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper: 25

Internal Assessment: 25

The main objective of the Paper Setter:-

- (i) Familiarize the students with the process and skills of creation and management of enterprise.
- (ii) To plan, use, monitor and control resources optimally and economically.

CONTENTS

1. Preparation of project report of small enterprises/cottage industries/startups. (The students will be advised to develop a structured instrument (questionnaire) for conducting first hand survey of the various aspects of respective enterprise including the process of setting up of an enterprise, motivating factors responsible for undertaking entrepreneurial set up , capital invested, production techniques adopted, marketing practices adopted for sustainability and future prospects of the enterprise surveyed.
2. Class presentation of Project report by conducting the SWOT analysis and suggesting feasible measures for policy implementation.
3. Assignments/ presentation on opportunity scouting and idea generation. The contents of the assignment should be focused on the source of institutional finance to the business idea (including case analysis of any one financial institution)

B.Sc. Home Science Apparel & Textile Design (Semester-V)
EXTENSION EDUCATION-I
(THEORY)
(COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper : 40

Internal Assessment: 10

Objectives:

1. To understand the concept of extension and its relevance for self & national development.
2. To appreciate the role of Home Science extension in community development.
3. To sensitize students towards various methods, preparation and selection of suitable materials for effective communication.

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified

UNIT – I

1. Concept of education
 - Formal education
 - Non formal education
 - Informal education

2. Concept of Extension education
 - Meaning and scope of extension
 - Difference between formal education and extension education
 - Extension education process
 - Concept of e-Extension

UNIT – II

3. Principles and philosophy of extension education
 - Principles of extension education
 - Philosophy of extension education
 - Function of extension education

4. Home Science Extension as a discipline and its contribution towards development.

UNIT – III

5. Teaching methods for extension education

Concept of extension teaching methods

Methods and steps in extension teaching

6. Classification of extension teaching

methods According to form and use

Advantages and limitations of extension teaching methods

UNIT – IV

7. Audio-visual aids

Classification of audio-visual aids

Advantages and limitations of various audio visual aids

8. Factors affecting selection and use of extension teaching methods and aids

B.Sc. Home Science Apparel & Textile Design (Semester-V)

EXTENSION EDUCATION-I (PRACTICAL) (Common to all)

Credit hours: 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper: 25

Internal Assessment : 25

Objectives:

1. To prepare the students in developing various teaching methods and aids used in home science extension.
2. To develop the skills of students used in participatory approaches in program planning and evaluation.

Instructions for Paper Setter:

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and viva voice will be of 5 and 10 marks respectively (Total = 15 marks)

Contents:

1. Preparation of non-projected aids-
 - a. Chart/Posters
 - b. Flash cards/Flip book
2. As a traditional media of communication:-
 - a. Preparation of puppets
 - b. Writing stories for puppets.
3. Developing skills and use of following different teaching methods –
 - a. Role play
 - b. Puppet play
4. Visit to a community to study a government or voluntary organization in action.

RECOMMENDED READINGS:

1. Dhama, O.P. Bhatnagar, O.P., Second Edition 1985, Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
2. Dubey V.K. and Bishnoi Indira, First Edition 2008, Extension Education and Communication, New Age International Publishers, New Delhi.

3. **Supre S.V., Second Edition 1997, An Introduction to Extension Education, Oxford and IBH Publishing Co.Pvt.Ltd, New Delhi.**
4. **Ray G.L., Seventh Edition, 2008, Extension Communication and Management, Kalyani Publishers, New Delhi.**
5. **Desai Vasant, First Edition 1991, Fundamentals of Rural Development, Himalaya Publishing Henge.**
6. **Oakley P. and Garforth C. FAO, 1985, Guide to Extension Training.**
7. **Singh K. Uttam, Nayak A.K., Commonwealth Publishers, 2005, Extension Education.**

B.Sc. Home Science (Semester-VI)
(Apparel & Textile Design)

Sr. No.	Paper/Subject	Credit Hours			Theory Marks			Practical Marks			Total
		Th.	Pr.	Total	Paper	Int. Ass.	Total	Paper	Int. Ass.	Total	
1	Computer Aided Design-II	-	4	4	-	-	-	50	50	100	100
2	History of World Costumes	3	2	5	40	10	50	25	25	50	100
3	Line Development & Portfolio	-	6	6	-	-	-	-	100	100	100
4	Traditional Textiles (Common to ATD and Composite)	3	2	5	40	10	50	25	25	50	100
5	Needle Craft	-	5	5	-	-	-	50	50	100	100
6	Economics and Entrepreneurship Development-II. (Common to all)	2	2	4	40	10	50	25	25	50	100
7	Extension Education-II (Common to all)	2	2	4	40	10	50	25	25	50	100
	TOTAL			33							700

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
COMPUTER AIDED DESIGN-II
(PRACTICAL)

Credit Hrs.: 4/week

Exam Hrs.:3

Maximum Marks:100

Paper: 50

Internal Assessment: 50

Instructions to paper setters:

There will be 3 questions in all. The question paper should cover the entire syllabus.

Objectives:

To acquaint students with the tools of Photoshop and Tuka Design.

1. Detailed study of different tools of Photoshop.
2. Creating textile prints by using different placements.
3. Designing a mood board according to the selected theme.
4. Detailed study of different tools of Tuka Design.
5. Drafting of Child's Bodice Block with Sleeve.

Recommended Readings:

1. User Guide for the Software(Photoshop).
2. User Guide for the Software (Tuka Design).
3. Winfred,A. (1994).CAD in Clothing and Textiles.Blackwell Science.
4. Beazely,A. & Bond, T. (2004). Computer Aided Pattern Design and Product Development.UK: Blackwell Pub.

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
HISTORY OF WORLD COSTUMES
(THEORY)

Credit Hrs.: 3/week

Maximum Marks: 50

Exam Hrs.: 3

Paper: 40

Internal Assessment: 10

Instructions to paper setters:

1. There will be total nine questions carrying equal marks
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions from the whole syllabus
3. Five questions will be attempted in all, selecting one question from each section and the compulsory question.

Objectives:

To acquaint the students with costumes of different Ancient World Civilizations.

UNIT-I

1. Evolution of Ancient Indian Costumes
2. Influence of Mughal and British period on Indian Costumes

UNIT-II

3. Egypt civilization
4. Greek civilization

UNIT-III

5. Rome civilization
6. Byzantine civilization

UNIT-IV

7. French costumes during the following periods:
 - a) Middle ages
 - b) Renaissance period
 - c) Romantic period

NOTE: - Screening of period Films

- Visit to museums

Recommended Readings:

- 1. Biswas, A. "Indian Costumes". Publication Division. (2003).**
- 2. Pathak, Anamika "Indian Costumes". Lustre press, Roli books. (2006)**
- 3. Racinet, A. "The historical Encyclopedia of Costumes", Studio editions, England.(1988).**
- 4. Bradley, Carolyn G., "Western World Costume", British Commonwealth. (1955)**
- 5. Cosgrave B. (2000), "Costume & Fashion- A complete history", octopus publishing group Ltd.**
- 6. Laver, James "The concise history of Costume & Fashion", Harry N. Abrams, Inc. Publishers, New York.**
- 7. Black, J. Anderson and Garland, Madge. "A History of Fashion", Orbis Publishing, London. (1975)**
- 8. Arnold, J. "A handbook of Costume". Macmillan.(1973)**
- 9. Parey, L. "The Victoria and Albert Museum's Textile Collection British Textiles from 1850 to 1900", V and A Publications.**
- 10. Davenport, Millia. "The book of costume", Vol I, Crown Publishers, New York,(1962)**
- 11. Bhatnaga, P. "Traditional Indian Costumes and Textiles" Abhishek Publications(2004)**
- 12. Planche, J.R. "History of British Costumes", Johnson's Canons, Wilkin's Concilia. (2001)**
- 13. Kumar.Ritu, "Costumes and Textiles of Royal India". Christies Book Ltd., London. (1999)**
- 14. Alkazi.Roshan, "Ancient Indian Costumes" Art heritage, New Delhi. (2006)**
- 15. Dar, S.N. "Costumes of India & Pakistan: A historical and cultural study", Taraporevala sons & Comp. Pvt. Ltd., Bombay(1961).**

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
HISTORY OF WORLD COSTUMES
(PRACTICAL)

Credit Hrs.: 2/week

Exam Hrs.: 3

Maximum Marks:50

Paper:25

Internal Assessment:25

Instructions to paper setters:

1. Practical paper will be of 3 hours duration.
2. The question paper will be set from Topic III and IV.
3. Topic I and II is for file work only.

Objectives:

1. To acquaint the students with costumes of different civilizations
 2. To enable the students to design contemporary costumes by taking inspiration from various sources of Ancient world civilizations.
- I. Illustration of costumes of different Ancient world civilizations.
 - II. To identify the sources of inspiration from various ancient world civilizations:
 - a) Pottery
 - b) Textiles
 - c) Sculpture
 - d) Costumes
 - e) Mosaics
 - f) Painting
 - g) Architecture
 - III. To design contemporary dresses by taking inspiration from above sources.
 - IV. To develop design suitable for Textiles by taking inspiration from above sources.

Recommended Readings:

1. Baker G O'D. "A handbook of costume drawing (A guide to drawing the period figure)". Focal Press ELSEVIER, New Delhi . (2007)
2. Racinet, A. "The historical Encyclopedia of Costumes", Studio editions, England.(1988).
3. Laver, James "The concise history of Costume & Fashion", Harry N. Abrams, Inc. Publishers, New York.
4. Muller, C. "The timeline of world costumes", Thames and Hudson, (1993).
5. Lister, M. "Costume: An Illustrated Survey from Ancient Times to the Twentieth century" (1971)
6. Bradshaw, A. "World Costumes", Adam & Charles Black, London,(1959)
7. Arnold, J. "A handbook of Costume". Macmillan.(1973)

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
LINE DEVELOPMENT & PORTFOLIO-II
(PRACTICAL)

Credit Hrs.: 4pds/week

Maximum Marks:100
Internal Assessment:100

Objectives:

1. To enable students to showcase the collection.
2. To impart skills of portfolio development

I) Show-Casing the collection

II) Purpose of a portfolio:

- i) Portfolio for client
- ii) Portfolio for a prospective job interview

III) Portfolio Development

- a) Portfolio making by using appropriate techniques.
- b) To make a digital version of portfolio(C.D.)

Note:

1. There will be no exam.

Recommended Readings:

1. Ireland Patrick John, "Fashion Design Drawing and Presentation", BT Batsford, London, 1996.
2. Elizabeth Drudi, "Figure Drawing for Fashion Design", The Pepin Press.
3. Allen and seaman, "Fashion Drawing- The basic Principles", BT Batsford, London
4. Ritu, "Fashion Design and Illustrations", India Publishers.
5. Beasley Alison, "Computer Aided Pattern Design and product Development", Blackwell Science UK.
6. Janice Greenberg Ellinwood, "Fashion by Design" Fairchild Books. New York.
7. Karl Aspelund, " The Design Process", Fairchild Books, New York.
8. Elain Stone, "In Fashion", Fairchild Books, New York.
9. Julian Seaman, "Professional Fashion Illustration" BT Batsford Ltd. London.
10. Linda Tain, "Portfolio Presentation" Fairchild Books. New York.
11. Magazines- Vogue, Cosmopolitan, Fashion Bloom, Wedding Affair, Elle, Vivaha.

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
TRADITIONAL TEXTILES
(THEORY)
(COMMON TO COMPOSITE & APPAREL AND TEXTILE DESIGN)

Credit Hrs.:3/week

Exam Hrs.: 3

Maximum Marks:50

Paper: 40

Internal Assessment: 10

Instructions to paper setters:

1. There will be total nine questions carrying equal marks
2. Two questions will be set from each unit and one compulsory question carrying short answer type questions from the whole syllabus
3. Five questions will be attempted in all, selecting one question from each section and the compulsory question.

Objectives:

1. To impart knowledge of various aspects of Traditional Textiles of India.

Note: Study the following textiles with special reference to motifs, designs, colours and techniques .

UNIT- I

1. Resist dyed textiles
 - a) Bandhani of Rajasthan
 - b) Patola of Gujarat
 - c) Ikat of Orissa
 - d) Pochampalli of Andhra Pradesh

UNIT- II

2. Block printed textiles of Rajasthan
 - a) Sangneri
 - b) Bagru
 - c) Ajrakh
3. Painted textiles of Andhra Pradesh – Kalamkari

UNIT- III

4. Kashmir shawls
5. Kashmir carpets
6. Namda
7. Gaba

UNIT-IV

8. **Traditional Woven Textiles**
 - a) **Brocades of Banaras**
 - b) **Jamdani and Baluchari of Bengal**
 - c) **Kanjivaram of Tamil Nadu**
 - d) **Maheshwari of Madhya Pradesh**

Recommended Readings:

1. **Gillow John & Barnard Nicholas, Traditional Indian Textiles, Thames & Hudson Ltd. London (1991)**
2. **Sarabhai, Patolas&Ikat Resist dyed fabrics of India, Mapin Publishing Pvt. Ltd. Ahmedabad.**
3. **KaliyarVijai Singh, Indian Saris, Published by Wisdom Tree (2009).**
4. **Lynton Linda, The Sari, Thames and Hudson (1995)**
5. **Chattopadhyay K., Handicrafts and Industrial Arts of India, Taraporevala sons & co. Pvt. Ltd.Mumbai (1960).**
6. **Prakash K., Kalamkari, English Edition Publishers & Distributors Pvt. Ltd.**
7. **BhandariVandana&DhingaSudha, Textiles & Crafts of India, Prakash Book Depot (1998).**
8. **Rizvi Janet with Ahmed Monisha, Pashmina – The Kashmir Shawl and Beyond, Marg publications (2009)**
9. **Irwin John, The Kashmir Shawl, Her Majesty's Stationery office London (1973)**
10. **Kumar Noopur, Threads of HOPE- The Magical Weaves of Andhra Pradesh, Noopur Kumar Publications.**
11. **Mehta J. Rustom, Master pieces of Indian Textiles, D.B.Taraporevala, Bombay (1970)**

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
TRADITIONAL TEXTILES
(PRACTICAL)
(COMMON TO COMPOSITE & APPAREL AND TEXTILE DESIGN)

Credit Hrs.: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 25
Internal Assessment: 25

Instructions to paper setters:

There will be two questions in all, covering entire syllabus.

Objectives:

To acquaint the students with:

1. Knowledge of motifs and designs of Traditional Textiles.
2. Textures and colours used in Traditional Textiles.
3. Techniques of Tie and Dye and Printing.

1. Identification of various Traditional Textiles.

2. Collection of swatches/photographs and study the motifs, designs and colours of the following Traditional Textiles:-

a) Dyed textiles

- a) Bandhani of Rajasthan
- b) Patola of Gujarat
- c) Ikat of Orissa
- d) Pochampalli of Andhra Pradesh

b) Printed and painted textiles

- a) Sanganeri
- b) Bagru
- c) Ajrakh
- d) Kalamkari

c) Traditional Woven Textiles

- a) Kashmir shawls
- b) Kashmir carpets, Namda, Gaba
- c) Brocades of Banaras
- d) Jamdani and Baluchari of Bengal
- e) Kanjivaram of Tamil Nadu
- f) Maheshwari of Madhya Pradesh

3. Making samples of the following:-

- a) Tie and Dye
- b) Block printing
- c) Stencil printing.

Project work: To make an article, using any of the above technique or combination of Techniques from topic 3.

Note: Visit to state emporia to acquaint the students with Traditional Textiles of India.

Recommended Readings:

- 1. Gillow John & Barnard Nicholas, Traditional Indian Textiles, Thames & Hudson Ltd. London (1991)**
- 2. Sarabhai, Patolas & Ikat Resist dyed fabrics of India, Mapin Publishing Pvt. Ltd. Ahmedabad.**
- 3. Kaliyar Vijai Singh, Indian Saris, Published by Wisdom Tree (2009).**
- 4. Lynton Linda, The Sari, Thames and Hudson (1995)**
- 5. Chattopadhyay K., Handicrafts and Industrial Arts of India, Taraporevala sons & co. Pvt. Ltd. Mumbai (1960).**
- 6. Prakash K., Kalamkari, English Edition Publishers & Distributors Pvt. Ltd.**
- 7. Bhandari Vandana & Dhinga Sudha, Textiles & Crafts of India, Prakash Book Depot (1998).**
- 8. Rizvi Janet with Ahmed Monisha, Pashmina – The Kashmir Shawl and Beyond, Marg publications (2009)**
- 9. Irwin John, The Kashmir Shawl, Her Majesty's Stationery office London (1973)**
- 10. Kumar Noopur, Threads of HOPE- The Magical Weaves of Andhra Pradesh, Noopur Kumar Publications.**
- 11. Mehta J. Rustom, Master pieces of Indian Textiles, D.B. Taraporevala, Bombay (1970)**
- 12. Wells Kate, Fabric Dyeing and Printing, Conran Octopus Ltd. (1999),**
- 13. Clarke Simon, Textile Design, Laurence king publishing (2011)**
- 14. Hatanaka Kokyo collection, Textile Art of India, Chronical Books, San Francisco**
- 15. Desai Chelna, Ikat Textiles of India, Chronical Books, San Francisco**
- 16. F. Anderson, Tie Dye and Batik, Octopus Ltd. London (1974).**
- 17. Monk Kathleen, Fun with Fabric Printing, Mills and Boon Limited, London.**

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
NEEDLE CRAFT
(PRACTICAL)

Credit Hrs.: 5/week

Exam Hrs.: 3

Maximum Marks: 100

Practical: 50

Internal Assessment: 50

Instructions to paper setters:

1. Practical paper will be of 3 hours duration.
2. There will be two questions in all.
3. The question paper will be set from Section-I.

Objectives:

To enable the students to:

1. Understand technique of patch work, quilting, applique and macrame.
2. Understand the process of design and product development.

SECTION-I

1) Preparation of samples with the following techniques:

- A. Patchwork
 - a) Pieced Patchwork
 - b) Applied Patchwork
- B. Quilting
 - a) Hand-quilting
 - b) Machine quilting
- C. Applique
 - a) By hand
 - b) By machine
 - c) Reverse applique
- D. Macrame

SECTION-II

- 2) Development of a product range (minimum four articles) using any of the above technique or the combination of techniques.
- 3) Showcasing of the range through Exhibition.

Recommended Readings:

1. O'Neil Amanda, "Needle Work and Sewing Technique", Grange Books, Grange Yard, London, 1991.
2. Mary Walker Phillips, "Macrame", Pan Books Ltd., London.

3. Noreen Gladwin” and “Anna North,“Rug Making &Macrame”, Hamlyn Publishing Group Ltd., London.
4. Obhmas,“The Big Book of Needle Craft”.
5. HughersG. Bernard,“English Domestic Needle Work”, Abbey fine arts, London.
6. John Edith,“Ideas for Needle Craft”, BT Batsford Ltd., London.
7. “The Basic Book of Macrame& Tatting” Octopus Books Ltd.
8. CornstockNania, “The Mc Calls Book of Hand Crafts”, Hamlyn Publishing Ltd. London
9. Ickis Marguerite, “The Standard Book of Quilt Making & Collecting”, Dover Publications Inc. New York.
10. Gonin Eileen & Newton Jill,“Quilt Making for Your Home”, Octopus Books Ltd. Hongkong.
11. Nield Dorothea,“Adventures in Patchwork”, Mills and boons Ltd., London.
12. Timmins Alice,“Introducing Patchwork”,BT Batsford Limited, London.
13. Gorden Maggi,“Quilting Step By Step”, D K India, 2012.
14. Colley Averil,“Patch Work”, BT Batsford Ltd., London, 1958.
15. “Patch Work Quilt Design”, condorisha Publ. Ltd. 1987.
16. Murwin Susan Aylsworth& PayneSuzzyChalfant, “Quick and Easy Patch Work on the Sewing Machine”, Dover Publications Inc. New York.
17. “Reader Digest, Step by Step Guide Sewing& Knitting” Published by Reader’s Digest Pty Ltd. 1993 Australia.
18. Lawther Gail, “Easy To Make Applique”, Brockhampton Press London.
19. “Reader Digest, Complete Guide to Needle Work”, The Reader Digest Association, Inc. Plesantville, New York.

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
Economics and Entrepreneurship Development-II
(Theory)
(Common to all)

Credit Hrs. : 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper: 40

Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives

1. To introduce the students to the world of business by developing in to them the core skills and competencies required for an entrepreneur.
2. To learn the process of creation and management of entrepreneurial venture.

Unit-I

1. Small business enterprise management:

Setting up of small scale enterprise.

Institutions assisting Small business enterprises in India

2. Problems of small business enterprises in India.

Unit-II

3. Business Environment:

Types of Business environment: Micro and

Macro Factors affecting business environment

4. Profitability of business:

Social cost and benefit Analysis

Unit-III

5. Business marketing:

Marketing strategies-packaging, advertising, e-marketing, personal selling

6. Four Ps of marketing:

Product, Price, Place and Promotion.

Unit-IV

7. Project Finance

**Long term and short term sources of
finance Fixed capital and Working capital**

8. Project Formulation

**Need and scope
Elements of project formulation**

Recommended Readings:

- 1. Gupta C.B and Srinivisan N.P, “ Entrepreneurial Development” Sultan Chand and Sons, New Delhi**
- 2. Khanna S.S, “Entrepreneurship Development” Sultan Chand and Sons, New Delhi**
- 3. Patel, V. G., “The Seven Business Crises and How to Beat Them” Tata-McGraw, New Delhi, 1995.**
- 4. SIDBI Report on Small Scale Industries Sector (Latest Editions)**
- 5. Taneja, Satish and Gupta, S.L, “ Entrepreneurship Development-New Venture Creating” Galgotia Publishing House, New Delhi, Latest Edition**

**B.Sc. Home Science Apparel & Textile Design (Semester-VI)
Economics and Entrepreneurship Development-II
(Practical)
(Common to all)**

Credit Hrs.: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper: 25

Internal Assessment: 25

The main objective of the Paper setter:

- (i) Develop the ability to select potential areas for self-employment.
- (ii) To acquire the knowledge of optimum use of human resources.

CONTENT

1. Case study of an entrepreneur (at least one for successful and one for failure enterprise). The case study will include:

- 1. Important features of an enterprise.
- 2. Competencies of an entrepreneur.
- 3. Sources of finance
- 4. Reasons for success and failures.
- 5. Preparation of a report on the basis of case study analysis and giving innovative ideas for better enterprise management.

2. Developing a Business Plan for Micro enterprises. Calculation of Breakeven point and conducting feasibility analysis.

3. Steps to organize and manage any one of the

following: a. Cafeteria/Diet clinic

b. Nursery school/Day care

c. Boutiques/window and interior store display

d. Interior Design studios.

B.Sc. Home Science Apparel & Textile Design (Semester-VI)

EXTENSION EDUCATION-II THEORY (COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks : 50

Paper : 40

Internal Assessment: 10

Objectives:

1. To understand the concept of extension and its relevance for self & national development.
2. To appreciate the role of Home Science extension in community development.
3. To create awareness about rural development and various programs and agencies involved in it.

Instructions to the paper setter:

1. Each theory paper will be of 3 hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

UNIT – I

1. Rural development

Concept of rural development

**Role of extension workers in rural
development Qualities of extension worker**

2. Rural Development Programmes in India

Integrated Child Development Service (ICDS)

Integrated Rural Development Programme (IRDP)

Mahatma Gandhi National Rural Employment Guarantee Act(MGNREGA)

UNIT – II

- 3. Community development**
 - Concept and origin of community development
 - Basic features of community development
 - Philosophy of community development**

- 4. Introduction to Panchayati Raj-**
 - Concept of three tier system of administration
 - Evolution of panchayati Raj
 - Meaning of democratic decentralization**

UNIT – III

- 5. Extension programme**
 - Concept of extension programme.
 - Characteristics of a good extension programme.

- 6. Participation in extension programme**
 - Advantages of people's participation in extension programme
 - Reasons for non-participation of people
 - Levels of participation

UNIT – IV

- 7. Extension programme planning**
 - Concept of extension programme planning
 - Principles of extension programme planning

- 8. Process of Extension Programme Planning-Collect facts, analyse situation, identifying problems, decide objectives, develop plan of work, execute plan, evaluation of progress , reconsideration**

B.Sc. Home Science Apparel & Textile Design (Semester-VI)
EXTENSION EDUCATION-II
PRACTICAL
(COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks : 50

Paper : 25

Internal Assessment : 25

Objectives:

1. To enable the students to carry out their social responsibility by extending their knowledge and services to the people in need.
2. To develop skills in the use of participatory approaches in programme planning and evaluation.

Instructions for Paper Setter:

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and viva voice will be of 5 and 10 marks respectively (Total = 15 marks)

Contents:

1. Survey of a specific community for need assessment.
2. Presentation of planning and organization of a need based extension programme for the selected community in relation to anyone of the following aspects:-
 - a. Literacy
 - b. Income Generation
 - c. Health
 - d. Social Evil
3. Conduct an extension or outreach activity in a selected community.
4. Evaluation of the above extension or outreach activity conducted.

RECOMMENDED READINGS:

1. Dhama, O.P. Bhatnagar, O.P., Second Edition 1985, Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
2. Dubey V.K. and Bishnoi Indira, First Edition 2008, Extension Education and Communication, New Age International Publishers, New Delhi.
3. Supe S.V., Second Edition 1997, An Introduction to Extension Education, Oxford and IBH Publishing Co.Pvt.Ltd, New Delhi.

- 4. Ray G.L., Seventh Edition, 2008, Extension Communication and Management, Kalyani Publishers, New Delhi.**
- 5. Desai Vasant, First Edition 1991, Fundamentals of Rural Development, Himalaya Publishing Henge.**
- 6. Oakley P. and Garforth C. FAO, 1985, Guide to Extension Training.**
- 7. Singh K. Uttam, Nayak A.K., Commonwealth Publishers, 2005, Extension Education.**