

BHARATHIAR UNIVERSITY – COIMBATORE:641046
B.Sc. Fashion Apparel Management Degree Course
(For the students admitted during the academic year 2015-2016 Batch onwards)
SCHEME OF EXAMINATION – CBCS Pattern

Part	Study Components	Course Title	Hours per week	Examinations				Credit
				Dur.Hr s.	CIA	Marks	Total Marks	
Semester – I								
I	Language I		6	3	25	75	100	4
II	English I		6	3	25	75	100	4
III	Core Paper I - Principles & Elements of Fashion Design		4	3	20	55	75	3
	Core Paper II - Textile Science		4	3	20	55	75	3
	Core Paper III - Practical I - Computer Application Practical		4	3	40	60	100	4
	Allied Paper I - Principles of Management		4	3	25	75	100	4
IV	Environmental Studies #		2	3	-	50	50	2
Semester – II								
I	Language II		6	3	25	75	100	4
II	English II		6	3	25	75	100	4
III	Core Paper IV – Pattern Development		4	3	20	55	75	3
	Core Paper V - Apparel Manufacturing Technology		4	3	20	55	75	3
	Core Paper VI - Practical II - Pattern Making & Garment Construction		4	4	20	55	75	3
	Allied Paper II - Fabric Formation & Finishes		4	3	40	60	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
Semester III								
III	Core Paper VII – Financial Accounting		4	3	25	50	75	3
	Core Paper VIII - Product Engineering and Plant Lay Out		4	3	20	55	75	3
	Core Paper IX Apparel Quality Assurance		4	3	25	75	100	4
	Core Paper X - Practical III - Textile Testing and Fabric Design Analysis Practical		6	3	40	60	100	4
	Allied Paper III - Practical IV - Computer Aided Pattern Making		6	3	40	60	100	4
	Skill based Subject I – Apparel Production Planning & Control		4	3	20	55	75	3
IV	Tamil @ / Advanced Tamil# (OR) Non-major elective - I (Yoga for Human Excellence)# / Women's Rights#		2	3	50	50	50	2

Semester IV							
III	Core Paper XI - Apparel Merchandising	4	3	20	55	75	3
	Core Paper XII – International Business Environment	4	4	40	60	100	4
	Core Paper XIII - Marketing Management	6	3	20	55	75	3
	Core Paper XIV - Product Development And Sourcing	6	3	25	75	100	4
	Allied Paper IV - Fashion Media & Event Management	4	3	20	55	75	3
	Skill based Subject II - Apparel Fashion Business	4	3	25	75	100	4
IV	Tamil @ /Advanced Tamil # (OR)	2	3	-	50	50	2
	Non-major elective - II (General Awareness #)						
Semester V							
III	Core Paper XV – Retail Management	5	3	25	75	100	4
	Core Paper XVI – Garment Costing & Programming	5	3	25	75	100	4
	Core Paper XVII - Statistics for Management	5	3	25	75	100	4
	Core Paper XVIII – TQM in Apparel Industry	5	3	25	75	100	4
	Elective Paper I	5	3	25	75	100	4
IV	Skill based Subject III - Fashion Communication	5	3	20	55	75	3
Semester VI							
III	Core Paper XIX – Entrepreneurship and Small Business Development	4	3	25	75	100	4
	Core Paper XX Supply Chain Management	4	3	20	55	75	3
	Core Paper XXI - ERP in Apparel Industry	4	3	20	55	75	3
	Elective Paper II	4	3	25	75	100	4
	Elective Paper III	4	3	25	75	100	4
IV	Skill based Subject IV – Project Work & Viva Voce*	10	-	-	-	100	4
V	Extension Activities @	-	-	50	-	50	2
Total						3500	140

@ No University Examinations. Only Continuous Internal Assessment (CIA)

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*For Project Work 80% Marks & Viva Voce 20% Marks

List of Elective papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Fashion & Apparel Marketing
	B	Industrial Engineering Techniques
	C	Industrial Economics
Elective – II	A	Visual Merchandising
	B	International Trade & Documentation
	C	Entrepreneurial Development
Elective - III	A	Apparel Brand Management
	B	Apparel Retailing
	C	Human Values And Professional Ethics

Semester – I Core Paper I – Principles & Elements of Fashion Design

Unit I - Introduction to fashion

Fashion Definition – Fashion terminologies – Classification of fashion – Fashion cycle – Fashion forecasting – Factors influencing in fashion – Role and responsibilities of a fashion designers – Types of fashion designers.

Unit II - Elements of design

Introduction to design – Types of design – Elements and their importance in a design – Line – Types – Application of line in a garment – Influence of line in various illusion - Shape – Types – Importance of shape in garment design – Texture – Determinants of texture – Effect of texture on color & physical proportion

Unit III - Color & Color theory

Introduction to color theories – Dimensions of color – Color systems – Warm and cool colors – color schemes – Application of color in fashion design – Visual impact of color in a garment – Importance of color psychology

Unit IV - Principles of design

Importance of principles of design in fashion – Balance and its types – Proportion and its application in garment design – Emphasis – Creating emphasis in a garment using various techniques – Harmony and its impact in garment design – Rhythm – Application of rhythm in garment design

Unit V - Introduction to fashion style details and various garments

Importance of details in apparel design – Various types of neck, collar & sleeve – Different types of waist & hem lines – Types of plackets, Pockets- Garments for men, women and kids – Unisex garments – Intimate , active and functional garments

References

1. *Injoo Kim & Mykyung Uh*, Apparel Making in Fashion Design, Fairchild Publications, New York (2002).
2. *Bride M. Whelan*, Colour Harmony – A Guide To Creative Colour Combinations, Rockport Publishers, USA (1997).
3. *James Stockton*, Color, Chronicle Book Publishers, San Francisco (1984).
4. *Axel Venn*, Color Kaleidoscope, Mode... Information Group (1997).
5. *Sumathi.G.J*, Elements of Fashion and Apparel Design, New Age International (P) Ltd, New Delhi (2002).
6. *Patric John Ireland*, Fashion Design Drawing and Presentation, B.T.Batsfort Ltd, London (1982).
7. *Jenny Davis*, A Complete Guide to Fashion Designing, Bharat Bhushan Abhishek Publication (2006).
8. *Kathryn Mckelvey & Janine Munslow*, Fashion Source Book, Blackwell Publication (2006).
9. *Kathryn Mckelvey & Janine Munslow*, Fashion Design, Blackwell Publication (2003).
10. *Patric John Ireland*, Encyclopedia of Fashion Details, Prentice Hall, NJ (1987).

Core Paper II - Textile Science

Unit 1 : Natural Fiber

Introduction- Classification of textile fibres - Properties of textile fibres. Cotton : Grading of cotton - Properties of cotton fibre - Production, morphological structure, properties and end uses of: Flax – Jute. Introduction to protein fiber - Production of silk - Morphological structure of silk - Properties of silk - varieties of silk - Morphological structure of wool - Composition of wool fibres – Properties of wool fibres – Woollen Vs Worsted Yarns

Unit 2: Regenerated fiber

Introduction -Manufacturing sequence of viscose fibre - Viscose fibre properties, Introduction of cuprammonium rayon- Introduction of cellulose acetate rayon - Introduction of Modal,Llyocell & Bamboo fibres. Filament Spinning Techniques.

Unit 3: Synthetic Fiber

Introduction to Polymer – Types of Polymer & Polymerization. Fibre manufacturing & Properties of Polyester, Nylon, Acrylic & Spandex fibres - Brief study about micro fibre, Aramid fibres.

Unit 4 : Yarn Formation

Introduction to yarn classification – Staple spinning system – Production sequence for cotton yarn – Comparison of carded and combed yarn – Yarn winding – waxing – Study of yarn quality parameters – Various yarn package defects – Introduction to blended textiles – types and benefits– Double yarn production.

Unit 5 : Latest trends in textile fibers and yarns

Introduction to organic cotton & specialty natural fibers such as, banana, pineapple, spider Silk – Brief study about OE & Airjet Spinning. Study about Fancy yarns and sewing threads , properties and end uses – Introduction to fibers and yarns used in technical textiles.

Reference Books:

1. W.E. Morton & J.W.S. Hearle, Physical properties of textile fibres, Textile Institute, U.K.
2. Progress in textiles: Science and technology Vol.-2 By Dr. V.K. Kothari, I.I.T. Delhi.
3. Hand book of textile fibres by J.Gordon Cook
4. Manufactured fibre technology by V.B. Gupta & V.K. Kothari
5. Essential fibre chemistry by M.E. Cartor
6. Synthetic fibres by Fournier. New fibre by T.Hongu, G.O. Phillips, Woodhead publications.
7. Fibre chemistry by M. Lewin, E.M. Pearce, Marcel & Dekkan Inc.
8. Regenerated Cellulosic fibres by C. Wooding, Woodhead publishing Ltd.
9. The technology of short-shape staple spinning – W. Klein
10. Cotton spinning – Taggart
11. Spun yarn technology – Oxtoby
12. New Spinning Technology Vol. 4 & 5 –W.Klien

Core Paper III - Computer Application Practical

MS Office

1. Prepare an interview call letter and send using mail merge in MS Word.
2. Design the given advertisement using in MS word. Apply various fonts and pictures.
3. Create line, bar and pie charts for the given data using MS Excel.
4. Prepare students mark statement with the following fields Roll No, Name, Sub1, Sub2, Sub3, Sub4, Sub5. Calculate Total, Average, Result and Grade. Apply Conditional formatting.
5. Prepare employee salary list with fields Employee No, Employee Name, Experience, Basic Pay, HRA,DA,LIC,PF. Calculate Gross Salary & Net Salary based on the following conditions

Experience	HRA	DA	LIC	PF
5 Years & Above	30%	15%	3%	700
Less than 5 Years	15%	5%	3%	700

6. Prepare a power point presentation about a product. Apply animation and slide timing.
7. Create an EMail ID and use various mail features.

Corel Draw

8. Design a T Shirt and apply patterns.
9. Design a wedding invitation

Photoshop

10. Create the given design

HTML

11. Design five web pages with hyperlinks linking all pages

Allied Paper I - Principles of Management

Unit I

Nature and scope of management – Management and Administration – Evolution of Management thoughts – Taylor & Scientific Management, Fayol's Principles of Management - **Planning** : Meaning and purpose of planning – Planning Process – Types of planning - Measures of effective Planning, Barriers to Effective Plan, Management by Objectives; Decision making: Process of Decision making -types of Decisions.

Unit II

Organizing: Types of organization – Organizational structure & Process –Departmentation-Span of control – Committees. Delegation and centralization line & staff relationship. **Staffing**: Sources of recruitment – Selection process - Training methods – Performance appraisal.

Unit III

Direction: Meaning, nature, scope and principles of direction, supervision; Motivation - Meaning, nature and importance of motivation, Theories of motivation. **Controlling**: Need for co-ordinating – Meaning and importance of control - Control process –Types of control. Communication -Meaning, process, oral, written, Non-verbal, pictorial communication, communication channel, barriers in communication. Decision making – Process of decision making – Types of decisions – Problems involved in decision making.

Unit IV

Human Resource Function: Human Resource Philosophy – Changing environments of HRM – Strategic human resource management – Trends in HRM – Organisation of HR departments – Line and staff functions – Role of HR Managers. Job Analysis - Recruitment & Selection Process – Employee Testing & Selection.

Unit V

Employee Orientation & Training: Training Process – need analysis – Training techniques. Developing Managers: management development – on the job & off the job development. **Performance appraisal**: Methods - MBO approach. Compensation : basics – factors determining pay rate - Job evaluation – incentives.

References

1. *L.M.Prasath*, Principles Of Management
2. *O.P.Khanna*, Industrial Engineering And Management, Dhanpat Rai Publications, New Delhi (2006).
3. *Patrick.J.Montana and Bruce.H.Charnov*, Management, Barrows (2000).
4. *Harold Koontz and Heinz Weihrich*, Essentials of Management, Tata McGraw Hill (1998).
5. *James.A.F.Stoner, R.Edward Freeman and Danier.R.Gilbert.Jr.*, Management, Prentice Hall (1995).
6. *George.R.Terry and Stephen. G.Franklin*, Principles of Management, A.I.T.B.S (2003).
7. *K.Balasundaram*, Industrial Engineering & Management – IV Edition, Shree Ramalinga Sowdeswari Publications, Coimbatore (1986).
8. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India P.Ltd., Pearson.
9. David A. DeCenzo & Stephen P.Robbins, Personnel/Human Resource Management, Third edition, PHI/Pearson.
10. VSP Rao, Human Resource Management: Text and cases, First edition, Excel Books, New Delhi - 2000.
11. Dr. R.Venkatapathy & Assissi Menacheri, Industrial Relations & Labour Welfare, Adithya Publications, CBE, 2001.
12. Robert L.Gibson and Marianne H.Mitchell, Introduction to Counseling and Guidance, VI edition, PHI, 2005.

Semester II Core Paper VI - Pattern Development

Unit I

Introduction – Concept of basic pattern and grading – Different types of block pattern. Methods of pattern making with special reference to pattern drafting - Pattern making tools – Various pattern production terms–Standard body measurements for men’s wear, women’s wear and kids wear of different countries. Style wise component parts of a garment.

Unit II

Pattern positioning and lay out – Concept of pattern layout - Rules and methods of pattern layout – Adjusting the patterns to fabric. Fitting: Definition – Principles for a good fit– Checking the fit of a garment – Solving fitting problems in various garments.

Unit III

Draping – Importance of draping – Dress form and types – Draping steps for basic bodice, skirt, pants. Procedure to develop necklines: Jewel neck - Round neck - ‘U’ neck - Square neck - Pentagon neck - Star neck - Inside and outside scallop neck. Procedure to develop sleeves: Plain and puff sleeves.

Unit IV

Procedure to draft the ¼th patterns for Ladies wear: Blouse, kameez, salwar, midi, midi top. Style detailing – Skirt, Plackets, Pockets, Pants, Sleeve, Collar, Necklines.

Unit V

Basic principle of dart manipulation – Displacement of bust dart (waist – side seam, armhole – neck of front edge).Grading – Definition – Principles of grading - Master grades – Basic back & front grades – Grading of basic sleeve, basic collar, trousers.

References:

1. *Helen Joseph Armstrong*, Pattern Making For Fashion Design, Harper Collins Publishers (1987).
2. *Winifred Aldrich*, Metric Pattern Cutting, , Blackwell Science Ltd, England (1994).
3. *Winifred Aldrich*, Metric Pattern Cutting for Men’s Wear, Blackwell Science Ltd, England (1990).
4. *Winifred Aldrich*, Metric Pattern Cutting for Children’s Wear (From 2 – 14 Years), Blackwell Science Ltd, England (1991).
5. *Gerry Cooklin*, Pattern Cutting for Women’s Outerwear, Blackwell Science Ltd, England (1992).
6. *Gerry Cooklin*, Pattern Grading for Women’s Clothes, Blackwell Science Ltd, England (1990).
7. *Gerry Cooklin*, Pattern Grading for Men’s Clothes, Blackwell Science Ltd, England (1992).
8. *Gerry Cooklin*, Pattern Grading for Children’s Clothes, Blackwell Science Ltd, England (1991).
9. *Gerry Cooklin*, Master Patterns and Grading for Women’s Outsizes, Blackwell Science Ltd, England

Core Paper V - Apparel Manufacturing Technology

UNIT – I

Introduction – Concept of Basic Pattern and Grading - Pattern Making Tools – Production Terms & Information- Rules in pattern Layout – Common Methods for Layout – Layout Asymmetrical Designs, Bold Designs, Stripped and checked Designs. Procedure to Develop various Neckline – Procedure to Develop various Sleeves

UNIT – II

Procedure to Draft the Patterns of: Basic T Shirt – Polo Shirt – Shirt – Trouser ; Procedure to Draft the Patterns of: Kids Wear – Ladies Skirt – Ladies Nighty - Basic Bodice (With Reduced Scale) - Grading- Principle of Grading: Master Grades –Basic Back & Front Grades – Grading of Basic Sleeve–Selecting a Grading System

UNIT – III

Types of Cutting Machines and their application – Detailed Study on Band Knife and Straight Knife Machines – Introduction and Basic Concept of Fabric Spreading Machines.

UNIT – IV

Classification of Garment Manufacturing machines – Applications – Description and Functioning of Single Needle Lock Stitch Machine, Double Needle Lock Stitch machine, Over Lock Machine, Flat Lock Machine – Possible Modifications – Attachments for Various Purpose Guides – Folders - Flat Bed – Cylinder Bed – Post Bed – Applications – Types and Parts of Machine Needles – Needle Sizes.

UNIT – V

Button Stitching – Snap Button Fixing – Bar Tacking – Feed Off the Arm – Embroidery Machines – Placket Making Machines – Heavy Duty Sewing Machines - Introduction to Various Machines For Garment Finishing – Fusing – Sucking – Ironing – Packing.

REFERENCE

1. Apparel Manufacturing – Hand Book – *Jacob Solinger*.
2. How to Make Sensing Pattern – *Maccam, Dinald H*.
3. Pattern making for fashion Design – *H.G.Armstrong*.
4. Metric Pattern Cutting – *Winifred Aldrich*.
5. Pattern Making Made Easy – *Gollian Holman*.
6. Fabric, Form and Flat Pattern Cutting – *Winifred Aldrich*.

Core Paper VI - Practical II - Pattern Making & Garment Construction

List of Experiments

Men's Wear

- | | | |
|----------------------------------|--------------------------------|------------------|
| 1. Polo t-shirt with half sleeve | 2. T-shirt with raglan sleeve. | 3. Men's Trouser |
| 4. Brief and boxer shorts. | 5. Men's Hood Jacket. | |

Kid's Wear

- | | | | |
|-----------------|--------------|-----------|---------|
| 1. A line frock | 2. Baba suit | 3. Romber | 4. Pant |
|-----------------|--------------|-----------|---------|

Women's Wear

- | | | | |
|------------------------|-------------|----------------|-------------------|
| 1. Ladies Basic Bodice | 2. Nighties | 3. Ladies Tops | 4. Skirt "A line" |
|------------------------|-------------|----------------|-------------------|

Allied Paper II - Fabric Formation & Finishes

Unit – I Weaving

Classification of fabric forming methods – Weaving preparatory processes and its objectives. Passage of material through a plain power loom – Primary, secondary & auxiliary motions of a loom. Classification of Looms. Shuttle less looms: Introduction - Advantages - Types of shuttle less looms.

Unit – II Types of Weaves

Introduction to weaves – Weave diagram – Plain weave & derivatives – Twill weave & derivatives – Satin & sateen weaves – Honeycomb – Huck a back. Brief study about dobby & jacquard mechanisms.

Unit III Knitting

Comparison of weaving and knitting - Principles of weft and warp knitting – Classification of knitting machines - Yarn passage diagram of a circular knitting machine – Knitting machine elements and description - Knitting cycle of latch needle with sinker. Principal weft knit stitches. Study of Basic weft knit structures

Unit-IV Dyeing & Printing

Preparatory process for coloration and its objectives. Classification of dyes. Role of auxiliary chemicals used in processing. Garment dyeing. Methods of printing. Styles of printing. Various novel printing types (Flock, Foil, Plastisol, Puff)

Unit V Printing

Classification of finishes. Mechanical finishes: Calendering – Compacting - Heat setting, Shearing & Raising. Chemical Finishes: Softeners – Bio Polishing – Acid wash. Brief study about eco friendly textiles.

References:

1. *R.Marks, A.T.C. Robinson*, Principles of Weaving, The Textile Institute, Manchester (1976).
2. *B.Hasmukhrai*, Fabric Forming, SSM ITT Co operative stores Ltd, Komarapalayam (1996).
3. *Prof.N.N.Banerjee*, Weaving Mechanism, Vol. I & Vol. II, Published by Smt.Tandra Banerjee, West Bengal (1999).
4. *Prof.J.L.Chakravorty*, Mechanism of Weaving Machines, Smt.B.Chakravorty, Serampore, W.B. (1984).
5. *Blinov.I, Belay.S*, Design of Woven Fabrics, MIR Publishers, Moscow (1988).
6. *D.B. Ajgaonkar*, Knitting Technology
7. *David .J.Spencer*, Knitting Technology
8. Dyeing and chemical technology of textile fibres, Charles Griffin & Co – E.R.Trotman
9. Technology of Bleaching and Dyeing of Textile Fibres Vol.1, Part–I, 1979, Mahajan Book Publishers, - *Chakravarthy RR And Trivedi S.S*
10. The Bleaching and Dyeing of Cotton Material 1983, Weaver's Service Cent *Prayag R.S.*,
11. Chemical Processing of Synthetic Fibres and Blends 1982, John Wiley & Sons, New York. *Datye K.V and Vaidhay A.A.*,
12. Cellulosics Dyeing, Society of Dyers and Colourists(1995) - *John Shore*,
13. Textile Coloration and Finishing, Carolina Academic Press, Durham, North Carolina (1996) - *Warren.S.Perkins*,

Semester III Core Paper VII - Financial Accounting

Unit I

Overview: Accounting concepts, conventions and principles; Accounting Equation, International Accounting principles and standards; Matching of Indian Accounting Standards with International Accounting Standards.

Unit II

Mechanics of Accounting: Double entry system of accounting, journalizing of transactions; preparation of final accounts, Profit & Loss Account, Profit & Loss Appropriation account and Balance Sheet, Policies related with depreciation, inventory and intangible assets like copyright, trademark, patents and goodwill.

Unit III

Analysis of financial statement: Ratio Analysis- solvency ratios, profitability ratios, activity ratios, liquidity ratios, market capitalization ratios ; Common Size Statement ; Comparative Balance Sheet and Trend Analysis of manufacturing, service & banking organizations.

Unit IV

Funds Flow Statement: Meaning, Concept of Gross and Net Working Capital, Preparation of Schedule of Changes in Working Capital, Preparation of Funds Flow Statement and its analysis ; Cash Flow Statement: Various cash and non-cash transactions, flow of cash, preparation of Cash Flow Statement and its analysis.

Unit V

Investment Decision: Appraisal of project; Concept, Process & Techniques of Capital Budgeting and its applications; Risk and Uncertainty in Capital Budgeting; Leverage Analysis – financial, operating and combined leverage alongwith implications; EBIT-EPS Analysis & Indifference Points.

References

- 1) Narayanswami - Financial Accounting: A Managerial Perspective (PHI, 2nd Edition).
- 2) Mukherjee - Financial Accounting for Management (TMH, 1st Edition).
- 3) Ramchandran & Kakani - Financial Accounting for Management (TMH, 2nd Edition).
- 4) Ghosh T P - Accounting and Finance for Managers (Taxman, 1st Edition).
- 5) Maheshwari S.N & Maheshwari S K – An Introduction to Accountancy (Vikas, 9th Edition)
- 6) Ashish K. Bhattacharya- Essentials of Financial Accounting (PHI, New Delhi)
- 7) Ghosh T.P- Financial Accounting for Managers (Taxman, 3rd Edition)
- 8) Maheshwari S.N & Maheshwari S K – A text book of Accounting for Management (Vikas, 1st Edition)
- 9) Gupta Amrishi - Financial Accounting for Management (Pearson Education, 2nd Edition)
- 10) Chowdhary Anil - Fundamentals of Accounting and Financial Analysis (Pearson Education, 1st Edition).

Core Paper VIII – Product Engineering & Plant Layout

Unit I

Product analysis: Relationship between quality and construction of sewn product geometric principles of draping, drafting and industrial patterns product specifications.

Unit II

Production control and Engineering :Industrial engineering concepts - Development and application of standard data for pre-costing and factory scheduling - Basic production systems - production control charts.Manufacturing Information system: Systems and procedures

Unit III

Production Management analysis: Analysis of techniques for material utilization and cutting of raw materials for all types of sewn products principles and methods of costing, evaluation of equipment for examining, spreading, cutting, marking and ticketing - solution of production problems in spreading, cutting and cost control.

Unit IV

Plant Layout Definition - Types of production layout, criteria for evaluation of a plant layout, determining minimum space requirement, calculation grid, plant size location, Basic production line layout, Government regulations for plant layout.

Unit V

Time and motion study: General approach for making a time and motion study, preliminary data for time and motion study sheet; sewing work study, Principles of work cycle timing methods, objectives of time study, statistical approaches – statistical calculation of time study- operator efficiency distributions. Evaluating motion study data - Principles for improving sewing and pressing operations.

References :

1. Jacob Solinger., " Apparel Manufacturing Handbook ", VanNostrand Reinhold Company (1980).
2. Bethel , Tann , Atwater and Rung., " Production Control ", McGraw Hill Book Co., New York, (1948).
3. Biegel , John. E., " Production Control ", A Quantitative Approach " Prentice Hall Inc., (1971) 2nd edition.
4. Apple. J. M., " Plant Layout and Materials Handling ", The Ronald Press Co., New York (1950).
5. Immer , John. R., " Layout Planning Techniques ", McGraw Hill, New York, (1950).
6. Barnes, Ralph M., " Motion and Time Study ", John Wiley and Sons., New York., (1958) 4 th edition.

Core Paper IX – Apparel Quality Assurance

Unit I

Design satisfaction tests. Fabric specification - cloth defects. Fabric Inspection Systems: four point system - shrinkage potential. Spirality & Bowing in Knits.

Unit II

Garment specification - manufacturing specification - name of operation and associated details in respect of sewing, dyeing and washing of garments.

Unit III

Garments testing-seam strength ,seam slippage ,garment checking procedure,interlining-peel bond strength Style features - trims specification - stitch specification - size scale – garment dimensions and tolerances.

Unit IV

Quality of trims and accessories. Defects in garments and their remedies - A, B and C zones in a garment with respect to defects.

Unit V

Quality management concepts - quality control and inspections - SQC. - acceptance sampling - TQM. - ISO. Laboratory testing for quality and performance.

References:

1. Mehta V., " Managing quality in the apparel industry ", New Age International, Chennai, 1998.
2. Sigmon, D.M., Grady P.L., and Winchester S.C., " Computer Integrated Manufacturing and Total Quality Management ", Textile Progress, The Textile Institute, Manchester, 1998.
3. Laing, R.M. and Webster J., " Stitches and Seams ", The Textile Institute, Manchester, 1998.
4. Glock R.E. and Kunz G.I., " Apparel Manufacturing: Sewn Product Analysis ", Prentice Hall, 1995.
5. Mehta P.V. " An Introduction to Quality Control for the Apparel Industry ", Marcel Dekker, 1992.
6. Cooklin G., " Garment Technology for Fashion Designers ", Blackwell Science

Core Paper X - Practical III - Textile Testing and Fabric Design Analysis Practical

1. Determination of count of yarn using wrap reel & weighing scale.
2. Determination of lea strength & CSP using lea strength tester.
3. Determination of Fabric Bursting Strength.
4. Determination of color fastness of given sample to washing by using launderometer.
5. Determination of color fastness of given sample to rubbing by using crockmeter
6. Determination of dimensional stability % of a given fabric / garment to washing.
7. Analyze the given knitted fabric sample for the following particulars:
 - A) Course and Wale Density
 - B) Loop length
 - C) Areal Density (GSM)
 - D) Tightness Factor
 - E) Technical graph , Cam order, Needle order

Allied Paper III - Computer Aided Pattern Making

CAD software is used to practice the following on the styles mentioned,

1. Create Pattern on computer screen, adding details to patterns.
2. Digitizing, saving, extracting & editing patterns from stock library of Patterns.
3. Grading patterns on different size scale.
4. Making Marker plan for cutting fabrics.
5. Estimating lay length and calculating marker efficiency.
6. Fit analysis of the given pattern using 3D CAD software.

Styles

1. Men's Basic T Shirt
2. Raglan with Pocket
3. Men's Polo T Shirt
4. Men's Trouser
5. Men's T-Shirt with hood
6. Men's Inner Garment – Vests RN / RNS
7. Ladies Skirt
8. Women's Nighties
9. Kid's Wear – Romber
10. Kid's Wear – A Line frock
11. Children's Suits And Pyjama

Skill Based Subject I – Apparel Production Planning & Control

Unit I

Introduction :control parameters, apparel production parameters, planning and lead-time. Product development: Steps from prototype to production model, Importance of pre-production activities;

Unit II

Introduction to timetable concepts.Product data management: Understanding and interpretation of specification sheet.

Unit II

Operation sequence development: Garment breakdown with machine and attachment details, development of production grid for garment construction, development of production flowchart. Bundle tickets: Guidelines for bundle ticket design, functions of bundle tickets, bundle ticket control.

Unit III

Different manufacturing systems: Make through and Assembly line manufacturing - advantages and disadvantages. Lay lot planning: Numerical exercises on lay lot planning to optimize cutting cost, bundling, ticketing and cutting room control formats.

Unit IV

Production Planning And Control :Capacity calculation for cutting, sewing and finishing. Determination of machine requirements for new factory. Line balancing: Determination and allocation of manpower and, machine for balanced production in existing plant for a given target.

Unit V

Quality In Product Development :Quality assurance during product development - methods to avoid problems during pattern making, garment construction and other areas. Inspection procedures. Work-study in garment industry - methods to control time and cost.

References :

1. A.J. Chuter., " Introduction to Clothing Production Management ", Blackwell Scientific Publications
2. David J. Tyler., " Materials Management in Clothing Production ", Blackwell Scientific Publications Professional Books.

Semester – IV Core Paper XI - Apparel Merchandising

Unit I

Merchandising: Introduction, Meaning- Apparel Merchandising – Concepts of ‘Six Rights’ – Organisation structure of an apparel industry – Classification of Exporters - Rating or Grading of export houses – Classification of buyers – Export merchandising and retail merchandising – Company profile and its contents. Types of merchandiser - Functions of a merchandiser – Essential requisites of a good merchandiser – Vendor sourcing, evaluation and development – Global sourcing – Vendor nomination by buyers – Reasons for vendor nomination.

Unit II

Process flow in apparel industry – Buyer sourcing & communication – Enquiry – Order confirmation – order review and its importance – Planning & programming: Master planning, Scheduling or route card – Factors for route card - programming for yarn, knitting, dyeing, stitching, sampling, accessories – Samples: Meaning & importance – Types of samples – expedition of samples

Unit III

Inspection and its types – Testing – Check points before cutting - Pilot run or trial run and its importance – Approvals - Types of approvals – Shipping marks – Final inspection procedures – Self, Second and Third party inspection - Effective expedition procedures.

Unit IV

Order sheet and its contents – Packing list and its contents – Document formats: order sheet, packing list, invoice, inspection and testing reports etc., - Assortment and its types. Documents recording and maintenance – Claims and reasons for claims - Factory audits – Buyer’s code of conducts.

Unit V

Advertising- scope, importance, types, merits & demerits; sales promotion, personal selling. Retail management. Export associations – Apparel Export Promotion Council – Journals and magazines related to apparel and textiles –Trade shows and Fairs – Participation in trade shows – Advantages of trade shows and fairs - Apparel & Textile Trade shows and fairs in India.

References

- 1., Building Buyer Relationships, *Daragho' Reilly, Jullian J. Gibbs*
- 2 Inside the Fashion Business, Mc Millan Publishing Co.,.
3. Fashion Merchandising, *Elian Stone,*
4. Apparel Merchandising, An integrated Approach, Krishnakumar, M, 2010, Abishek Publications
5. Apparel Merchandising, *Robin Mathew,* Book Enclave Publishers, Jaipur
6. Apparel Merchandising, *Jerry A & Rosenau,* Fairchild Publications, London

Core Paper XII – International Business Environment

Unit I

An Overview of International Business: Introduction, Definition of International Business, Changing Environment of International Business, Globalization of Markets, Trends in Globalization, Effects and Benefits of Globalization.

Unit II

International Business Theories: Introduction Mercantilism, Absolute Advantage Theory Comparative Cost Theory, Hecksher-Ohlin Theory, Product Cycle Theory. Instruments of Trade Policy- Tariffs, Subsidies, Import Quotas, Voluntary Export Restraints, Administrative Policy, Anti-dumping Policy.

Unit III

Foreign Exchange Determination Systems: Basic Concepts Relating to Foreign Exchange, Various types of Exchange Rate Regimes, Factors Affecting Exchange Rates, Brief History of Indian Rupees Exchange Rates.

Unit IV

International Institution: UNCTAD, Its Basic Principles and Major Achievements, IMF, Role of IMF, IBRD, Features of IBRD, WTO, Role and Advantages of WTO. Regional Economic Integration: Introduction, Levels of Economic Integration, Regional Economic Integration in Europe, Regional Economic Integration in U.S.A., ASEAN, SAARC, Integration for Business.

Unit V

Introduction to Export Management: Introduction, Definition of Export, Benefits arising from Export, Export Prospect for Small Firms, Importance of Exports to India, Process of Export Marketing, Sources of Export Information, Important Publications, Important Organizations, Direction of Exports from India, Recent Trend in India's Export.

References:

- 1) Agarwal Raj - International Trade (Excel, 1st Ed.)
- 2) Hill C.W. - International Business (TMH, 5th Ed.)
- 3) Daniels - International Business (Pearson, 1st Ed.)
- 4) Black J - International Business Environment (Prentice Hall)
- 5) Bhalla V.K. - International Business Environment (Anmol)

Core Paper XIII - Marketing Management

UNIT - I

Introduction to Market- Marketing Management- Marketing concept – Meaning, Importance of marketing in developing countries - Functions of Marketing – Market Segmentation -Marketing environment: various environmental factors affecting the marketing function.

UNIT - II

Buyer Behaviour – Factors influencing buyer behavior,decision process-Buying motives -Marketing strategy –Positioning the market through Product Life Cycle- Market Structure - Definition and types of channel - Channel selection & problems.

UNIT - III

The Product-Marketing characteristics -consumer goods-industrial goods- Production policy -Product Life Cycle (PLC) - Product mix - modification & elimination – packing- Developing new Products-strategies-Managing product lines & brands.

UNIT - IV

Pricing: Meaning to Buyer & Seller - pricing policies –Setting the price, Adapting the price, Factors influencing pricing decisions - Competitors action to price changes - Multiproduct pricing. Physical Distribution - Management of physical distribution - Marketing risks.

UNIT - V

Branding Decisions: Brand-Brand Image, Brand Identity-Brand Personality –Positioning and leveraging the brands-Brands Equity-Managing Retailing-Types & Decision, Wholesaling-Types & Decision, Logistics-Objectives,Decision & organizational lesson about market logistics.

REFERENCE BOOKS:

1. Philip Kotler - Marketing Management
2. Rajan Nair - Marketing Management
3. Cundiff and Still - Fundamentals of modern marketing

Core Paper XIV - Product Development and Sourcing

UNIT I

Product – Concept - Product classification - New product Development – Elements and Process – Product Life Cycle – Stages & Strategies - Product Positioning – Concepts & Strategies – Designs & Prototyping - New Product Launch – Test marketing – Product Mix & Product Line.

UNIT II

Pricing Strategies – Importance & Objectives – Pricing Methods - Pricing under various markets – Product Costing – Trade margins – Price Term such as Ex Factory, Ex Market, FOB, FOR, C&F, CIF etc – Quotation and order confirmation – Taxes and Duties.

UNIT III

Market and Product Research – Market Segmentation – Marketing Mix – Marketing Plan – Channels of Distribution – Advertising & Sales Promotion – Introduction to Sales Forecasting Techniques.

UNIT –IV

Introduction : Global Sourcing– Research Approaches – current state of Global Sourcing and Supply – Global reach supplier and procurement centre locations – Firm Performance requirements –Reasons to Source globally – Results Achieved from global sourcing – Implementation of requirements important to Global Sourcing Effectiveness.

UNIT –V

A Prescriptive Model for Global Sourcing and Supply – Five-level Model – Global Sourcing and Supply Process Models – Critical Success factors Impacting Global Sourcing and Supply Excellence – Global Sourcing Performance outcomes-Global Sourcing and Supply Critical Success Factors

References

1. Urban, Hauser, and Dholakia, N. *Essentials of New Product Management*
2. U.C. Mathur, *Product management*
3. Fred Sollish, *Strategic Global Sourcing Best Practice, Wiley Publications.*
4. Mort Harris, *Integrated Supply And Analysis, Hillcrest Publications.*
5. Bhuvan Unhelkar, *Global Integrated Supply Chain Systems, Idea group Publications*

Allied Paper IV- Fashion Media and Event Management

UNIT – I

Why Event Management, Requirement of Event Manager, Analyzing the events, Scope of the Event, Decision-makers, Technical Staff, Developing Record-Keeping Systems, Establishing Policies & Procedures

UNIT – II

Preparing a Planning Schedule, Organizing Tasks, Assigning Responsibility, and Communicating, Using the Schedule Properly, The Budget, Overall Planning tips, Checklists, Expert Resources, Computer Software Required.

UNIT – III

Who are the people on the Event, Locating People, Clarifying Roles, Developing content Guidelines, Participant Tips, Reference Checks, Requirement Forms, Introduction, Fees & Honorariums, Expense Reimbursement, Travel Arrangements, Worksheets.

UNIT – IV Types of Events, Roles & Responsibilities of Event Management in Different Events, Scope of the Work, Approach towards Events

UNIT – V Introduction to PR – Concept, Nature, Importance, Steps, Limitations, Objectives Media – Types of Media, Media relations, Media Management PR strategy and planning, introduction Media Business-Mass Media. Intrusiveness – identifying right PR strategy, Brain Storming sessions, Event organization, writing for PR(public relation)

REFERENCES:

1. Event Management: A Blooming Industry and an Eventful Careerby Devesh Kishore, Ganga Sagar Singh - Har-anand Publications Pvt. Ltd. -
2. Event Management by Swarup K. Goyal - Adhyayan Publisher - 2009
3. Event Management & Public Relations by Savita Mohan - Enkay Publishing House.
4. Principles of Advertising and IMC”-Tom Duncan-Tata McGraw-Hill-Second Edition.
5. Advertising and Promotion”–an IMC Perspective–Kruti shah and Alan D’souza-Tata cGraw–Hi

Skill Based Subject II – Apparel Fashion Business

Unit I

Fashion Environment: Introduction to fashion industry - Fashion environment - Demographic & Psychographic, Economic, Sociological and psychological factors – Fashion cycle. Fashion business- Designer's role, manufacturer's role and retailer's role. Leaders of fashion - Theories of fashion adoption.

Unit II

Fashion Business: Scope of fashion business - Primary level, secondary level and retail level – Type of fashion designers - Role of fashion designers – Principles of merchandising – Types of merchandising – Role of merchandiser - Effect of Consumer – Types of buyers – communication with buyers and consumers.

Unit III

Fashion Forecasting: Fashion forecasting – Need for forecasting - Forecasting agencies – Role of forecasting agencies - Fashion direction and recent trends – Product development – product mix, factors affecting product mix.

Unit IV

Fashion Market: Market research: Types of market – Retail & wholesale market – Domestic & international market – Designers labels – Chain stores – Brand market. Sourcing: method of sourcing – Raw material sourcing – Accessory sourcing . Resource planning – Supply and demand chain analysis – Just in time technology.

Unit V

Advertisement and Promotions: Advertising: purpose – methods - types of advertising media - Sales promotion methods - Trade fairs and fashion shows as sales promotion techniques - Feedback to production and marketing departments - Use of computers as a tool for effective merchandising - Fashion auxiliary services.

References

1. Fashion Merchandising, *Elia Stone*,
2. Inside the Fashion Business.. Mc Millan Publishing Co.,
3. Apparel Merchandising
4. Fashion : Concepts to Consumers

Semester V - Core Paper XV – Retail Management

Unit I -RETAILING: Definition, characteristics and functions of retailing, retailing channels, retail strategy, trends in retailing. Retailing organization. Retail Customer Behaviour: Consumer behaviour, factors influencing consumer decision making, consumer decision process, influence of situational variables on shopping behaviour, case analysis on customer profile.

Unit II -RETAIL MARKET SEGMENTATION AND TARGET MARKETING: Segmentation - definition and benefits, Segmenting, targeting and positioning. Criteria for segmentation, Market targeting, customer profile, survey of buyers intentions. Retail Location and Space Management: Location decision. Types of retail location. Site selection analysis. Store space management.

Unit III - PRODUCT AND MERCHANDISE MANAGEMENT: Product management, brand management and retailing, merchandise management, model stock plan, constraining factors, types of suppliers and selection criteria, category management, merchandise management planning in retail segments.

Unit IV -RETAIL PRICING: Influences on retail pricing strategy, development in retail prices, retail pricing objectives, approaches and strategies in retail pricing, consumer responsiveness to prices, role of price elasticity and sensitivity. Retail Promotion Strategy.

Unit V - E-TAILING: Objectives, online retail categories, pitfalls of e-tailing. Relationship marketing in retailing: Evolution of relationship marketing, relationship marketing strategies in retailing, relationship marketing in the organized and unorganized retail sectors.

TEXT BOOKS:

1. Chetan Bajaj, Rajnish Tuli, Nidhi V Srivastava, “Retail Management”, Oxford University Press, 2005.
2. Jarnow J A, Guerreiro and Judello. B, “Inside the Fashion Business”, Pearson Education, New Delhi, 2004.

REFERENCES:

1. Mike Easey, “Fashion Marketing “, Blackwell Scientific Publications, 2002.
2. Gibson G. Vedamani, “Retail Management Functional Principles and Practices”, Gaico Publishing House, second edition, 2002.
3. Laine Stone, and Jean Samples, “Fashion Merchandising – An Introduction”, Mc Graw Hill Book Co., 2001.
4. Gini Stephens Frings, “Fashion From Concept to Consumer”, Prentice Hall, 1999.

Core Paper XVI – Garment Costing & Programming

Unit – I

Principles of costing - requirements of good costing system - cost unit - types of costs - Elements of cost - direct material cost - direct expenses - direct wages - indirect materials - indirect expenses - indirect labour - overheads - - prime cost - work cost - cost of production - total cost. INCO terms & its relationship with costing

Unit – II

Budgeting: The budgeting process: Budgeting principles for the apparel industry- Fixed vs.variable budget - Master budget-laminations of budgets- any justification effort -Planned Vs Actual Cost.

Unit III

Cost estimation of yarn, knitted fabric, dyeing, printing & finishing. Woven Fabric Costing: fabric types, yarn consumption, weaving price Cost estimation for cutting, stitching, checking, packing, forwarding, shipping, and insurance.

Unit – IV

Estimation of factory cost for Woven & Knitted - vest, briefs , shorts, t-shirts, pajamas, children's wear, ladies wear, Woven Shirt, Woven Tops & Bottom. Various factors to be considered in costing for domestic products & international products

Unit – V

Determining Pricing of apparel products: Price elasticity of demand and supply, sample costing-marginal revenue and marginal cost, cost plus pricing methods;, Full cost pricing, conversion cost pricing, differential cost pricing ,variable cost pricing, direct cost pricing derivation of cost of apparel products-woven/knits.

References

1. *S.P.Jain and KL. Narang*, "Cost Accounting", Kalyani Publishers,New Delhi.Edn.2005
2. *R.S.N. Pillai and V. Bagavathi*, "Cost Accounting",S. Chand and Company Ltd., New Delhi.Edn.2004.
3. *Apparel Costing, A functional Approach – Krishnakumar, M*, Abishek Publications, Chandigarh, 2012

Core Paper XVII Statistics for Management

UNIT I INTRODUCTION TO STATISTICS & PROBABILITY

Statistics – Definition, Types. Types of variables – Organising data - Descriptive Measures. Basic definitions and rules for probability, conditional probability independence of events, Baye's theorem, and random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.

UNIT II SAMPLING DISTRIBUTION AND ESTIMATION

Introduction to sampling distributions, sampling distribution of mean and proportion, application of central limit theorem, sampling techniques. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.

UNIT III TESTING OF HYPOTHESIS

Hypothesis testing: one sample and two sample tests for means and proportions of large samples (z-test), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations. ANOVA one and two way – Design of experiments.

UNIT IV NON-PARAMETRIC METHODS

Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit. Sign test for paired data. Rank sum test. Kolmogorov-Smirnov – test for goodness of fit, comparing two populations. Mann – Whitney U test and Kruskal Wallis test. One sample run test, rank correlation.

UNIT V CORRELATION, REGRESSION, INDEX NUMBERS AND TIME SERIES ANALYSIS

Correlation analysis, estimation of regression line. Time series analysis: Variations in time series, trend analysis, cyclical variations, seasonal variations and irregular variations. Index Numbers – Laspeyre's, Paasche's and Fisher's Ideal index.

TEXT BOOKS

1. Levin R.I. and Rubin D.S., Statistics for Management, 7th edition, Prentice Hall of India Pvt. Ltd., New Delhi, 2001.
2. Srivatsava TN, Shailaja Rego, Statistics for Management, Tata McGraw Hill, 2008.
3. Anand Sharma, Statistics for Management, Himalaya Publishing House, Second a. Revised edition, 2008.

REFERENCES

1. Anderson D.R., Sweeney D.J. and Williams T.A., Statistics for business and economics, 8th edition, Thomson (South – Western) Asia, Singapore, 2002.
2. Aczel A.D. and Sounderpandian J., Complete Business Statistics, 6th edition, Tata McGraw – Hill, 2004.
3. Prem S. Mann, Introductory Statistics, Wiley Student Edition, Fifth Edition.

Core Paper XVIII – TQM in Apparel Industry

Unit I

Quality – Evolution of Quality management – Quality Function and Quality Planning – Basic concepts of Total Quality Management (TQM) – Principles of TQM – Important Phases of TQM – Quality Trilogy – Four pillars of TQM – PDCA cycle & PDSA cycle – Kaizan concept – 5’S Philosophy – Quality Circles

Unit II

Statistical Quality Control (SQC) : Definition – SQC techniques – Frequency distributions: Discrete and Continuous – Measures of Central tendency: Mean, Median & Mode – Measures of dispersion: Range, Mean Range, Mean Deviation, Percentage Mean Deviation, Standard Deviation, Coefficient of Variation – Normal distribution – Binomial distribution – Poisson distribution

Unit III

Control charts: concepts and uses – Control limits – Control charts for Variables and Attributes: X Charts – R chart – P chart – NP chart – C chart – Acceptance sampling – Types of sampling plans: Single, Double and Multiple Sampling plans – OC curves – AQL and LTPD – Sampling errors and sampling risks – Producer’s risk and Consumer’s risk

Unit IV

ISO 9000 Standards: Meaning & Definition – ISO 9000 family of standards – Elements of ISO – Benefits of ISO 9000 System – Study on ISO 9001:2000 Guidelines and Standard Clauses – Implementation Procedures and requirements for ISO 9001:2000 system – Quality Manual and its contents – Accreditation and Certification agencies – Quality audit – Types of quality audit – Audit procedure – Requirements and characteristic of a Quality auditor

Unit V

Environmental Management System (EMS) – Meaning & Definition – Elements of EMS – Benefits of EMS – Environmental Policies – Implementation of ISO 14000 – Study on other management systems : SA8000, OHSAS 18000, WRAP.

References

1. *Dr. S.P.Gupta*, “Statistical Methods”
2. *J.M. Juran*, “Quality Control Handbook”
3. *V.K.Kapoor*, “Statistics”
4. Total Quality Management – *Bhaskar, S* - Anuradha Publications, Kumbakonam.
5. Total Quality Management – *Shridhara Bhat, K* -, Himalaya Publishing Corporation New Delhi
6. Handbook of Total Quality Management - *Armstrong* , Jaico Publications, New delhi.

Skill Based Subject -III Fashion Communication

Unit – I*

Retailing - Fashion Retailing - Scope of Retailing – Classifications - Retail Store Functions - Retail Marketing Channels - Retail Strategy Development - Retail Adaptation

Unit - II

Retail Environment - Retailing and Economy - Political and Social Influences - Retailing Structures - Department Stores, Specialty stores and Discount Retailers - General Merchandise Chains - Classic Shopping Malls

Unit - III

Visual Merchandising – Introduction – Visual Merchandising Environment – Elements - Store Design – Store Image - Global Retailing – Retail Competition – E – Retailing – Criteria for Global Success in Global Retailing – Factors.

Unit - IV

Online Marketing Communication – Strategies of Fashion Communication – Individual and Group Influences on Consumer Behaviors – Impact of Technology on Fashion Communication

Unit - V

Objectiv/es of Fashion Retail Promotion - Promotion – Mix – Retail Sales Promotion – Publicity – Public Relation – Personal Selling – Advertising – Advertising Agencies – Fashion Shows and its types.

References:

1. Fashion Advertising and Promotion, *Jay and Ellen Diamond*, Fair Child Publishers, New York, 1999.
2. Retailing Principles, *Lynda Gamans Poloian*, Fair Child Publishers Inc., New York, 2003.

Semester VI Core Paper XIX - Entrepreneurship and Small Business Development

Unit I

Entrepreneurship: Concept and Definitions; Entrepreneurship and Economic Development; Classification and Types of Entrepreneurs; Entrepreneurial Competencies; Factor Affecting Entrepreneurial Growth – Economic, Non-Economic Factors; EDP Programmes; Entrepreneurial Training; Traits/Qualities of an Entrepreneurs; Entrepreneur; Manager Vs. Entrepreneur.

Unit II

Opportunity / Identification and Product Selection: Entrepreneurial Opportunity Search and Identification; Criteria to Select a Product; Conducting Feasibility Studies; Project Finalization; Sources of Information.

Unit III

Small Enterprises and Enterprise Launching Formalities : Definition of Small Scale; Rationale; Objective; Scope; Role of SSI in Economic Development of India; SSI; Registration; NOC from Pollution Board; Machinery and Equipment Selection; Project Report Preparation; Specimen of Project Report; Project Planning and Scheduling using Networking Techniques of PERT / CPM; Methods of Project Appraisal.

Unit IV

Role of Support Institutions and Management of Small Business : Director of Industries; DIC; SIDO; SIDBI; Small Industries Development Corporation (SIDC); SISI; NSIC; NISBUD; State Financial Corporation SIC; Marketing Management; Production Management; Finance Management; Human Resource Management; Export Marketing; Case Studies.

Unit V

Incentives and subsidies – Subsidied services – subsidy for market. Transport – seed capital assistance – Taxation benefit to SSI role of entrepreneur in export promotion and import substitution.

References

1. *Desai, Vasant* (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. *Kaulgud, Aruna* (2003). Entrepreneurship Management. Vikas Publishing House, Delhi.
3. *Cynthia, L. Greene* (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd.,Singapore.
4. *Chandra, Ravi* (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., New Delhi.
5. *Balaraju, Theduri* (2004). Entrepreneurship Development: An Analytical Study. Akansh aPublishing House, Uttam Nagar, New Delhi.
6. *David, Otes* (2004). A Guide to Entrepreneurship. Jaico Books Publishing House, Delhi.
7. *Taneja* (2004). Entrepreneurship. Galgotia Publishers.

Core Paper XX - Supply Chain Management

UNIT I: INTRODUCTION

Supply chain- definition, importance, types of supply chain flow, decision process in supply chain - a strategy design, chain planning and operation; organization of supply chain, process view – push/pull and cycle view; achieving strategic fit.

UNIT II: NETWORK

Designing and distribution – roles, factors influencing and design options-its advantages and disadvantages; value of distributors - factors influencing design frame work and networks in practice

UNIT III: DEMAND AND SUPPLY

Forecasting – definition, role, importance, characteristics of forecasting, basic approaches in demand forecasting and forecasting methods; managing demand and managing supply in supply chain, roles of aggregate planning in supply chain. Quick response strategy in apparel industry

UNIT IV: INVENTORY AND SOURCING

Inventory – definition, roles, characteristics and Inventory Functionalities; determining optimum level of availability, order point, EOQ, role of safety inventory and accommodating uncertainties. Sourcing – role, supplier assessment, selection criteria, design collaborations and plan analysis for sourcing, JIT Technology of inventory management in apparel industry

UNIT V: TRANSPORTATION, PRICING AND TECHNOLOGY

Transportation – modes, factors influencing the selection, routing and scheduling, transport network; Role of revenue management in supply chain – customer and seasonal demand, role of bulk and spot contract in revenues; the role of IT in supply chain – CRM, ISCM, SRM, TMF and E-Business. Effect of lack of coordination in supply chain and international issues in supply chain

REFERENCES

1. Kulkarni Sarika and Sharma Ashok “**Supply Chain Management**”, Tata McGraw Hill, New Delhi, 2007
2. Francis Harrison, “**Supply Chain Management**”, Butterworth Publications, New Delhi, 2002
3. Chopra Sunil and Meindl Peter, “**Supply Chain Management: Strategy, Planning and Operation**”, Pearson Education, 2002
4. Burt David N., Dobler Donald W. and Starling Stephen L., “**World Class Supply Management: A Key to Supply Chain Management**”, Tata McGraw Hill, 2007
5. Mohanty R. P. and Deshmukh S. K., “**Essentials of Supply Chain Management**”, Jaico Publications, 2004

Core Paper XXI ERP in Apparel Industry

Unit 1

Introduction: ERP: An Overview, enterprise – an overview, types of Enterprises, need for ERP, benefits of ERP, ERP and related technologies, Business Process Reengineering (BPR), Benefits of BPR

Unit II

Implementation of ERP: ERP implementation lifecycle, implementation methodology, hidden costs, organizing the implementation, vendors, consultants and users, contracts with vendors, consultants and employees, project management and monitoring

Unit III

The Business Modules: Business modules in an ERP package - finance, manufacturing, human resources, plant maintenance, materials management, quality management, sales and distribution. Significance and advantages of each of the modules

Unit IV

ERP in apparel industry: Production resource planning – principles and management of and demand chain analysis– quick response strategy - material management for ‘Quick Response’ – ‘Just in Time (JIT) Technology’; Production planning, costing and merchandising software

Unit V

Computer Applications: Management Information System in garment industry – EDI in garment technology; Use of Computers in Designing, Pattern making, computerized production systems, communicating with vendors and buyers; Telephone, fax, video conferencing, intranet, internet, etc; Export documentation, retailing; Methods of communicating with consumers

References

1. Alexis Leon, “ERP Demystified”, Tata McGraw Hill, New Delhi, 2000
2. Glock Ruth E. and Kunz Grace I., "Apparel Manufacturing - Sewn Product Analysis", Blackwell Scientific Publications, 1996
3. Joseph A. Brady, Ellen F. Monk, Bret Wagner, “Concepts in Enterprise Resource Planning”, Thompson Course Technology, USA, 2001
4. Garg Vinod Kumar and Venkitakrishnan N. K., “Enterprise Resource Planning – Concepts and Practice”, PHI, New Delhi, 2003
5. Enterprise Resource Planning, Theory & Practice – Rahul Altekar , V., Printice Hall of India, New Delhi, 2005
6. Enterprise Resource Planning– Leon , V., Diamond Publications, New Delhi.
7. Enterprise Resource Planning – Mary Sumner, Diamond Publications, New Delhi, 2001

Skill Based Subject IV – Project Work & Viva Voce

Students have to undertake project in the areas of Knitting / Weaving/ Processing /Garment Manufacturing industry. A Team consisting of Internal & External Experts will evaluate the Project Report. The Viva-Voce will be conducted.

Semester V Elective I – A - Fashion & Apparel Marketing

Unit I

Meaning and classification of marketing, Fashion marketing, fashion market – size and structure, marketing environment – micro and macro marketing environment, trends in marketing environment

Unit II

Marketing function – assembling, standardization and grading and packaging, product planning and development, importance of fashion products, nature of fashion products. The fashion industry and new product development, product-mix and range planning, fashion and related cycles.

Unit III

Fashion advertising and preparation of advertising for apparel market, advertising media used in apparel market – advantages and limitations, advertising department – structure and functions, advertising agencies- structure and functions. Advertising budget

Unit IV

Fashion sales promotional programmed for apparel marketing, communication in promotion, personal selling, point of purchase, sales promotion – objectives and methods, Marketing research – definition, scope and process – areas of research

Unit V

Pricing policies and strategies for apparel products, Importance of price policies, Functions and factors influencing pricing – internal and external, pricing strategies for new products, methods of setting prices

References

1. Marketing – *R S N Pillai and Bhagavathi*, S Chand and company Ltd, New Delhi, 1987
2. Marketing management – *Dr B K Chatterjee Jaico*, Juice Publishing house, Bombay 1982
3. Marketing Principles and methods – *Philip C F and Duncon*, Irwin Publications
4. Principles of marketing – *Backman T N, Munard H H and Davidson W R*, Ronald Press company, New York 1970
5. Fashion Marketing – *Mike Easey*, Black well Science Ltd, 1995
6. Advertising – *C N Sonatakki*, Klyani Publishers New Delhi, 1989

Semester V Elective I – B: Industrial Engineering Techniques

Unit I

Introduction: Definition, purpose, available techniques, Aspects, physical facilities & operating facilities, scientific management, resources productivity. Work Study: Definition, objectives, Techniques, method study, work measurement, Purpose of work study, steps, different phases,

Unit II

Method Study: Definition, Steps, Selection of problems, Collection of facts and consideration about objectives, Recording techniques, Elements of a process analysis, Operation process chart, Different process charts, Critical examination.

Unit III

Work Measurement :Definition ,Uses, Techniques, Time Study, Measuring Instruments, Elements in time study, factors, alignment chart, Performance rating methods, observed time & normal time , allowances, Standard time, Work sampling Predetermined Motion Time study, Motion time data for assembly operations, Work factor system, method time measurement.

Unit IV

Job Evaluation: definition, Aspects, Uses, different methods of job ,Ranking system, Grade description system, point method, Factor comparison method. Wage Incentive Plans: Unit of measurement, Various methods, Characteristics of wage, Incentive schemes, relationship between productivity, wages & cost. different wage incentive plans , relationship between indirect labour , direct labour & total plant productivity . Plant Maintenance: Introduction, Systems of maintenance, break down, Planned, Corrective and Preventive maintenance, maintenance schedule

Unit V

Operations Research: Introduction, concept of optimization, methods of operations research, linear programming , distribution methods, Assignment models, queuing theory, Sequencing problems, Network Analysis, Game theory, Replacement analysis, depreciation.

References

1. Industrial Engineering and Management by *O. P. Khanna*,
2. Textile Mill Management by *Ormerod* ,
3. Engineering Economics by *Kleinfeld*,
4. Managerial Economics by *M.V.Palyee, K.C. Sankaranarayan & J.T. Payyappilly*,
5. Essentials of Engineering Economics by *Kasner*,
6. Management in a Global Perspective by *K'oonze & Weihrich.*,
7. Quantitative Approach to Management by *Levin, Rubin, et. al.*,

Semester V Elective I – C: Industrial Economics

UNIT-I : FRAMEWORK OF INDUSTRIAL ECONOMICS

Concept and organization of a firm - Ownership control and objectives of a firm - Passive and active behavior of firm - Size, Growth, Profitability, Productivity, Efficiency and Capacity Utilization - Concept and measurement - Role of Industrialization in Economic Development - Factors for and against industrial development.

UNIT-II : INDUSTRIAL LOCATION AND REGIONAL DEVELOPMENT

Determinants of Industrial Location - Technical, economic, infrastructural and other factors - Theories of industrial location - Weber, August Losch, Sargant Florence - Development of Backward Regions - Government Policy and approach for the development of backward regions - Recent Programs for Development of Backward Regions.

UNIT-III : INDUSTRIAL STRUCTURE AND INDUSTRIAL PRODUCTIVITY

Alternative Patterns of Industrialization - Hoffman's hypothesis of capitalistic economies - Simon Kuznet's interpretation - Industrialization and planned economies - Cheney's Patterns of industrial changes - Industrial Productivity in India - Labor Productivity - Factors influencing the labor productivity - Productivity Trends in India.

UNIT-IV : INDUSTRIAL PROJECT APPRAISAL

Classification of Industries - Industrial Policies and Industrial Legislations in India - Role of Public and Private Sectors - Recent Trends in MNC and LPG, FDI, and Joint ventures - Issues in Industrial Proliferation and Environmental Preservation - Pollution Control Policies - Project Appraisals - CBA - CB - NPV, IRR - Industrial Sickness.

UNIT-V : INDUSTRIAL FINANCE

Owned, external and components of funds -Role, nature, volumes, types of institutional finance -IDBI, IFCI, ICICI, SFCs, NIDC, SIDCS, UTI, LIC, General Insurance Corporations and Commercial Banks - Financial Statement Analysis.

Reference Books

1. Ahluwalia, I.J: Industrial Growth in India (Oxford University Press, New Delhi, 1985)
2. Barthwal, R.R: Industrial Economics (Wiley Eastern Ltd, New Delhi, 1985)
3. Cherunilam F: Industrial Economics: Indian Perspective (3rd Edition) (Himalaya Publishing House, Mumbai, 1994)
4. Desai B: Industrial Economy in India (3rd Edition) (Himalaya Publishing House, Mumbai, 1999)
5. Divine P.J & R.M Jones et. Al: An Introduction to Industrial Economics (George Allen and Unwin Ltd, London, 1976)
6. Hay D and D J Morris: Industrial Economics: Theory and Evidence (Oxford University Press, New Delhi, 1979)
7. Kuchhal S.C.: Industrial Economy of India (5th Edition) (Chaitanya Publishing House, Allahabad, 1980)
8. Singh. A and A.N Sadhu: Industrial Economics (Himalaya Publishing House, Bombay, 1988)

Semester V Elective II – A Visual Merchandising

Unit I

Introduction :Visual merchandising-introduction, concepts and role, importance in store planning andutilizing basic visual merchandising techniques; Role of atmosphere in garment retailing – immediate effects and simulation types, visual merchandisers in garment retailing

Unit II

Store Exterior And Interior: Store exterior – marquee, facade, exterior display, surrounding stores and displays; Store interior – store atmospheric, aesthetic, execution of store lay out - selection of display locations, lifts, staircase, elevators, utilization of store space; Display composition: Elements and principles of design, tools and materials

Unit III

Store layout: Factors considered in organizing effective display – balance, rhythm, proportion, texture, harmony and emphasis. Store layout planning- grid, race track, freeform – direction of flow and planogram; Design elements to create mood and impression – colour, angle, motion, simplicity, and repetition

Unit IV

Display: Seasonal and trend decision for point of emphasis – creativity in display; Planning of assortment, theme, ensemble, racks, shelves, bins, etc. and balance of display in a show room. Wall as retail selling tool – types of materials used merchandise display and effective wall planning. Application of colour schemes, colour psychology, creating mood by colour

Unit V

Fashion Retailing: Lightings - Lights types, selection, advantages and disadvantages, music.Using effective Graphics and sinages for theme, campaign and promotional aspects - safety and security; Theme, interior and exterior displays used in garment retail outlet, boutique and haute couture, accessories show rooms, mannequins, fabric and paper displays.

References

1. *Swapna Pradhan*, “Retailing Management”, 2nd Edition, Tata McGraw Hill Publishing Company Ltd, 2007
2. *Vedhamani and Gibson. G.*, “Retail Management:Functional Principles and Practices” Jaico Publishing House, 2007
3. *Bajaj Chetan, Tuli Rajesh, and Srivastava Nidhi V.*, “Retailing Management” Oxford University Press, New Delhi, 2007
4. *Lamba.A.J.*, “The Art of Retailing” Tata McGraw-Hill Companies, Inc, 2003
5. *Berman Barry and Evans Joel R.* “Retail Management: A Strategic Approach”
6. Prentice-Hill of India, 2002
7. *Uma Sekaran* , “ Organisational Behaviour
8. Industrial Psychology
9. *Aswethappa. K.* “Principles of Business Law”
10. *Bulchandani. K.R.* “Business Law”

Semester VI Elective II - B – International Trade & Documentation

Unit – I

Firm establishment: introduction – export promotion councils and their role – registration formalities - rcmc –IE code – RBI code – garment classification and categories for various countries – quota – quota distribution methods – quota transfer

Unit – II

Foreign trade documents: need, rationale and types of documents relating to goods – invoice – packing note and list – certificate of origin – certificate relating to shipments – mate receipt – shipping bill – caret ticket – certificate of measurement – bill of lading – air way bill – documents relating to payment – letter of credit – types of l/c - bill of exchange – letter of hypothecation – bank certificate for payment – document relating to inspection – certificate of inspection – gp and other forms.

Unit – III

Import procedure : import license – procedure for import license – import trade control regulation procedure – special schemes – replenishment license – advance license – split up license – spares for after sales service license – code number – bill of entry.

Unit – IV

Shipment and customs: preshipment inspection and quality control – foreign exchange formalities – preshipment documents - documentation terms - excise and customs clearance of export cargo – shipment of goods and port procedures – customs clearance of import cargo. Post – shipment formalities and procedures – claiming duty drawback and other benefits.

Unit – V

Payment and deliveries: terms of delivery – INCO terms – EXW – FCA – FOB – CFR – CIF – CPT – DAF – DDP – DDU. Terms of payment – open account – cheque – cash payment against documents – bank payment against documents (LC) – security and cost of various payment terms – assessing the risk in payment – role of ECGC and standard policy.

References:

1. Govt. Of India : Hand Book Of Import And Export Procedures.
2. *Bose. A. :* Streamline Your Export Paper Work., International Trade Form, Oct – Dec 1965.
3. How To Start Export.
4. CBI Booklets – Netherland
5. ECG C Services And Guidelines
6. AEPC Booklets

Semester VI Elective II – C - Entrepreneurial Development

UNIT-I : THE CONCEPT OF ENTREPRENEURSHIP

Entrepreneurial culture - establishing entrepreneurial system - idea processing, personal, financial information and intelligence - rewards and motivation - concept bank - role of industrial fair - Theories of entrepreneurship - entrepreneurial traits - types of entrepreneurs - behavioral patterns of entrepreneurs - entrepreneurial motivation.

UNIT-II : APPRAISAL OF PROJECT PROPOSALS

Feasibility prospects - project objectives, design, assessment of technical, economic, financial and marketing aspects - format to report - project management techniques - network analysis - activity performance, time schedules - factory design - Factory requirements - Factory Act provision.

UNIT-III : SOURCES OF PRODUCT FOR BUSINESS

Pre-feasibility study - criteria for selection of product - ownership - capital budgeting - project profile preparation - matching entrepreneur with the project - feasibility report preparation and evaluation.

UNIT-IV : SOURCES OF PROJECT FINANCE

Credit facilities - types of credit available - evaluation of loan proposals by financial institutions - leasing arrangement - evaluation of lease proposal - Marketing channel - selecting of channel members - setting quality standards - recruitment strategies - outstanding options.

UNIT-V : SUPPORT SYSTEM FOR ENTREPRENEURSHIP DEVELOPMENT: Entrepreneurship development programs in India - training institutions - institutions provided technical, financial marketing assistance - role of consultancy organizations. Recommended /

Reference Books

1. Hans Schollammer and Arthur H. Kniloff: Entrepreneurship and small business, Prentice Management, John Wiley.
2. Joseph R. Mancuso: How to Start, finance and manage your own small business, Prentice Hall.
3. R.A. Sharma: Entrepreneurial change in Indian Industries, Sterling, Delhi.
4. James R. Cook and Harpet: The Start up Entrepreneur, 1986.
5. John E. Tropman and Gersh Mornistar: Entrepreneurial system for the 1990s, Greenwood Press.
6. Gupta and Srinivasan, Entrepreneurial Development, Sultan Chand, New Delhi 1992.

Semester VI Elective III - A – Apparel Brand Management

Unit I

Introduction :Brand – introduction, functions, brand significance; branding – types and strategies international apparel brands - identification of perspectives and challenges to build brand- Indian garment brands and prospects of Indian brands

Unit II

Brand Appraisal:Brand appraisal – Definition and methods - exploration, market, customer, competition analysis, reasoning of brands importance and methods involved - laddering, emotional and rational, Brand mapping – circle, prism and triangle

Unit III

Positioning: Positioning – definition, types – benefit, usage, features, users, price, value technology, tradition, perceptual map – product class and customer segment; positioning strategies – non functional values, brand loyalty and pyramid; positioning strategies of international garment retailers

Unit IV

Identity And Extension: Brand identity and articulation – name, colour, design, logo and symbols, brand service advertising and cross cultural influence; brand extension – need and types; labelling and licensing of apparel products – types, license agreement, and international property rights; need for developing brand names and labels for apparel manufactured and exported from India

Unit V

Brand Measurement: Brand measurement- definition, need and methods – audit, track, brand overtime – managing brand image - need, concepts of management, forces affecting brand and maintenance of brand, Study on brands and brand management of Indian Garment

References

1. *Parameswaran M. G.*, “Building Brand Value”, Tata McGraw Hill Publishing Company Ltd, 2006
2. *Moorthy Y. L. R.*, “Brand Management –The Indian Context” Vikas Publication Pvt Ltd, 2007
3. *Verma Harsh V.*, “Brand Management Text and Cases” Excel books, 2006
4. *Mathur U. C.*, “Brand Management Text and Cases”, Macmillan India Ltd 2006.
5. Branding – *Vanauken*, Jaico Books, Delhi
6. Branding – *Geoffrey Randall*, Wood Head Publishing, England
7. Personal Branding – *Montoya*, Jaico Books, Chennai

Semester VI Elective III - B - Apparel Retailing

Unit I

Retail & Retailing – Meaning & definition – Scope of apparel retailing – Retailing terminologies – Types of retailers and retail formats – Global retailing scenario – Retailing scenario in India – Functions of retailers

Unit II

Retail strategies : Operational excellence , Product differentiation, Customer intimacy – Growth strategies – Market expansion strategies – Store planning – Location planning – Store design – Store design & retailing image mix – Space mix – Effective retail space management – Store layout – Floor space management

Unit III

Retail merchandising – Merchandise planning – Merchandise hierarchy – Buying function – Category management – Mark up & Mark down – Shrinkage in merchandising management – Gross margin return on inventory – Supply chain management in apparel retailing – ERP in apparel industry

Unit IV

Retail operations – Significant areas – Store operating parameters related to customers, stocks, space, employee, finance – Managing retail personnel – Manpower planning – Types of employees in retail – Remuneration structure – Visual Merchandising (VM): Definition & Meaning – VM Techniques – Elements of VM – Functions of a Visual Merchandiser

Unit V

Retail Brands and Branding – Functions of brands – Types of brands – Branding strategies – Store brands or private labels – Store brands Vs National brands – Famous apparel retail brands – Packaging – Functions of packaging – Kinds of packaging – Requisites of good package – Customer service management in retail – Service management model

References

1. Jaico Books, “Retail Management – Functional Principles & Practices”, *Gibson G. Vedamani*
2. “Retail management “
3. Retail Merchandising – part I
4. Art of retailing – *Arun Mahabharata* , Lotus press, New Delhi, 2008
5. Fundamentals of retailing – *Madan*, Tata Mcgraw, New Delhi
6. Retailing Management – *Levy*, Diamond Publications, Delhi

Semester VI Elective III - C Human Values and Professional Ethics

UNIT I

MANAGEMENT: Meaning, Definition, Significance, Functions – Planning, Organizing, Staffing, Directing and Controlling, Principles of Management.

SOCIAL RESPONSIBILITY AND ETHICS: Concept of Social Responsibility, Views of Social Responsibility – Economic Objectives Vs Social Objectives – Business Ethics.

UNIT II

PROBLEM SOLVING METHODS: SWOT Analysis of a Traditional Engineer – Kaizen Strategy and Values – Kaizen Approach for Problem Solving.– Process Oriented Management Vs Result Oriented Management.

HUMAN VALUES: Value Crisis in Contemporary Indian Society, Aesthetic Values, Moral and Ethical Values, Spiritual Values, Values in the Work Place.

UNIT III

INTERPERSONAL RELATIONSHIPS: Managing Emotions, Emotional Intelligence, Building Better Interpersonal Relations, Managing the Boss, Dealing with Subordinates – Case Study.

CREATIVITY: Creativity and Problem Solving – Creativity Process – Creative Individuals and their Characteristics – Techniques for Creative Problem Solving.

UNIT IV

HUMAN RESOURCE MANAGEMENT: Importance, Objectives, Functions, Job Analysis and Recruitment, Selection and Placement.

HUMAN RESOURCE DEVELOPMENT: Training and Learning, Determining Training Needs and Priorities, Formal Employee Training Methods, Management Development , Methods for Developing Managers, Evaluating Training Effectiveness – Case Study.

UNIT V

LEADERSHIP: Definition, Characteristics of Leadership, Leadership styles, Theories of Leadership – Tannenbaum – Schmidt Leadership Continuum – Managerial Grid Theory.

MOTIVATION: Meaning and Definition – Mechanism of Motivation – Maslow’s Need Hierarchy Theory, Mc Gregor’s Theory X and Y- Herzberg’s Two Factor Theory.

REFERENCES:

1. Jayshree Suresh and Raghavan B S, “Professional Ethics” S. Chand & Company Ltd., New Delhi, 2005.
2. Harold Koontz, Heinz Weihrich and Ramachandra Aryasri, “Principles of Management”, Tata McGraw Hill, New Delhi, 2004.
3. Bishop, Sue, “Assertiveness Skills Training – A Source Book of Activities” , Viva Books Pvt. Ltd., New Delhi, 2002.