FACULTY OF SCIENCE

SYLLABI

FOR

APPAREL MANUFACTURING TECHNOLOGY
(ADD-ON COURSE)

CERTIFICATE, DIPLOMA & ADVANCED DIPLOMA

EXAMINATIONS 2015

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING
IN
APPAREL MANUFACTURING TECHNOLOGY

(CERTIFICATE ADD ON COURSE) FOR THE EXAMINATION 2015

SCHEME OF STUDIES & EXAMINATION

<table>
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<tr>
<th>S. No.</th>
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<th>Pds/Week</th>
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PAPER A: APPAREL MANUFACTURING TECHNOLOGY

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/ WEEK

Note: Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

I Apparel Industry: Basic introduction & importance about-
   a) Domestic Industry
   b) Export industry

II Different types of sewing machines- their technology, care and maintenance:
   Single needle lock stitch
   Single needle chain stitch
   4- Thread over-lock machine
   5- thread over-lock machine
   Button hole machine
   Button stitching machine
   Flat lock machine

UNIT-II

III Pattern Making and garment construction tools for industrial use.
   a. Measuring tools
   b. Cutting tools
   c. Marking tools

IV Pattern Making- Different methods of developing a design
   Drafting
   Flat pattern method- Pivot and slash
   Draping
   Importance and significance

UNIT-III

V Fundamentals of apparel production
   Development of a range on paper
   Sampling
   Garment development
   Display of garments in the form of exhibition and fashion shows

UNIT-IV

VI Development of basic blocks
   Bodice
   Trousers
   Skirt

VII Garment construction- Need and its importance
   Basic seams
   Usage of appropriate seams at appropriate places.
   Role of garment construction in quality garments.
PAPER B: APPAREL MANUFACTURING TECHNOLOGY

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/ WEEK

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UNIT-I

I Textile Science
   a. Fiber fundamentals- classification, properties and Identification of different fibers- natural and man made.

UNIT-II

b. Yarn construction- Chemical and mechanical method.
c. Fabric construction- Weaving, Knitting, Knotting, Bonding, Felting.

UNIT-III

II Basic terminology used in Apparel Industry
Haute couture, custom clothes, Pret-e- porter, fashion, style, fad, classic, Hi- fashion, trims bias, yokes, grain, selvedge, fray, Notch, pucker, frill, flounces, Ruffles, style line, princess line, empire line, silhouette, accessories, notions, design, motif.

UNIT-IV

III Spreading and cutting
   Different spreading methods
      One way
      Two way Circular

IV Assembly line and its set up for-
   Skirt
   Trousers
APPAREL MANUFACTURING TECHNOLOGY (PRACTICAL)

M. MARKS: 100
Time: 3hrs
PERIODS: 6Pds./WEEK

Note: Examination will be of 3 hours duration. Question paper shall cover all the topics of the syllabus.

I Machinery and equipments for garment industry:
- Machine Handling
- Positioning of different parts in a machine
- Care and maintenance

II Fundamentals of apparel production parts and functions
- Market survey to understand the latest trends in-
  i. Fabrics
  ii. Accessories (Trims and Buttons)

III Pattern Making
- Development of basic blocks
- Bodice
- Trousers
- Skirt

IV Textile Science
- Visual Identification of fibers and nomenclature of fibers.

V CAD
- Paint brush
- Corel draw
- Application of the above in the form of assignment to show the design features in the garments.

VI Spreading and cutting
- One way
- Two way
- Circular
- ¼ Scale may be used to explain and specify on paper.

VII Field trips to the textile manufacturing units and garment manufacturing units.

VIII Project to study in details the different brands available in the market and reasons for a particular brand to sell the most.
(For example: it can be carried out for Men’s/ Women’s/ Children’s/ High fashion/ Sportswear/ Casual wear/ Ethnic etc.)

IX Project to study in details the different departments of an industrial unit and analysis i.e.
The importance of each department in the development of a good quality garment.

(The students are required to carry out a detailed survey/collect samples/ gather details/ prepare a project).
NOTE

TOPIC NO I- is viva based. Students can be asked about the different parts and functions of the machines.

TOPIC NO. II- Identification of weaves/fabrics may be asked.

TOPIC NO. III- Microscopic identification of fibers may be asked.

All other topics will be covered as practical demonstration.
20 marks will be allocated to the project work during the examination.
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PAPER A: PATTERN DEVELOPMENT AND INDUSTRIAL MACHINES

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/WEEK

Note: Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I
1. Apparel Industry its present scenario,
2. Different types of specialized sewing machine their technologies care and maintenance.
   A. twin needle unison feed lock stitch machine with large hook.
   B. Twin needle double chain stitch flat bed machine.
   C. Blind stitch machine.

UNIT-II
3. Taking body measurements
   a) Land marks  b) Tools  c)Precautions to be kept in mind  d) Types of measurements.

UNIT-III
4. Study of different type of patterns
   a. individual pattern  
   b. ready made pattern  
   c. trade pattern  
   d. block pattern layout  
   e. graded pattern

UNIT-IV
5. Development of pattern
   a) Men’s shirt  
   b) Shift dress  
   c) Jacket
PAPER B: APPAREL MANUFACTURING

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/WEEK

Note: Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Factors affecting selections of clothing

2. Clothing for different age groups
   a. Infant
   b. Toddler
   c. Pre schooler
   d. Elementary school child
   e. Pre adolescent
   f. Adolescent
   g. Elders and adults

UNIT-II

3. Fabric estimation
   a. Its purpose
   b. Children’s garments jangia, frock, sun – suit
   c. Female garments – blouse, ladies shirt and salwar
   d. Male garments – shirt, Kalidar Kurta and pyjama

UNIT-III

4. Quality control
   a. specification
   b. tolerance
   c. the sample garments

UNIT-IV

5. Ticketing and bundling of garments

GARMENT CONSTRUCTION (PRACTICAL)

M. MARKS: 100.
TIME: 3 Hour
PERIODS: 6/ WEEK

Note: Examination will be of 3 hours duration. Question paper shall cover all the topics of the syllabus.

1. To collect different fabrics swatches suitable for Apparel of different garments.
2. Introduction of marking and laying of pattern on fabric
3. Construction of samples
   a. Seams-Plain, French, run and fell, lap counter hem
   b. Plackets-continuous, two piece, zip insertion fly
   c. Pockets – convertible, mandarin, stand & fall

4) Drafting & construction of:
   a. Men’s shirt
   b. Trousers

5) Power Point for preparation of presentations
6) Field trips to garment manufacturing units for
   a) woven garments
   b) Knitted garments

7) A project to study in details the International brands in men’s and women’s wear in India and the reasons for these brands overpowering Indian Brands.
8) To study in details the work flow of garments Industry.
   (The students are required to carry out a detailed survey, collect samples/gather details/ prepare a project).

20 marks will be allocated to the project work during the examination

Reference:

Quality production – solinger, care and machinery equipment Latham.
Apparel Industry Introduction – Inside the fashion Business
Spreading and cutting – Introduction to clothing Technology.
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PAPER A: GARMENT ASSEMBLY AND PLANT LAY OUT

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/ WEEK

Note: Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

Quality control
i. Specifications
ii. Tolerances
iii. The sample garments

Lay out/Lay plans
i. Half garment lay
ii. Whole garment lay
iii. Single size lay
iv. Multi size lay
   a. Sectional lay
   b. Interlocking lay
   c. Mixed multi size lay

UNIT-II

Spreading
i. Preparation of fabrics
ii. Forms of spreading
   a. One way
   b. Face to face
   c. Two way

iii. Methods of spreading
   a. Manual spreading
   b. Spreading carriage
   c. Automatics spreading machines.

UNIT-III

Use of different type of cutters
Preparation for sewing
Ticketing and bundling
Production
UNIT-IV

Finishing
Labeling
Cleaning
Inspection
Packing

References:

1. Quality production, care and machinery equipment by Latham.
2. Apparel industry introduction.
3. Inside the fashion business.
4. Spreading and cutting
5. Introduction to clothing technology.
PAPER B: RESEARCH METHODS & STATISTICS

M. MARKS: 50
TIME: 3 Hour
PERIODS: 3/ WEEK

Note: Question paper will have four sections. Examiner will set a total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT – I

2. Types of research: Historical, Survey, experimental and case study.

UNIT-II

3. Data gathering instruments: Questionnaire, Interview, Observation.
4. Sampling Type of samples selection of samples, benefits of sampling.

UNIT – III

5. Definition, scope functions and limitations of statistics, statistics and research.
7. Measures of Dispersion

UNIT-IV

8. Correlation and Regression.
9. Index number
10. Time series Analysis.

Reference:

1. Methods of social survey and Research by Dr. S.R Bajpai Kitab Ghar – Kanpur
2. Scientific social surveys and Research by Young Panline V.
3. Research method in Social Relations by Sellitz. Claire
4. Quantitative methods by T.R Jain
5. Statistical methods by Prof. S.P Gupta
GARMENT ASSEMBLY AND PLANT LAY OUT

Practical

M. Marks: 100
Duration: 3hrs
Time: 6Pds/wk

Note: Examination will be of 3 hours duration. Question paper shall cover all the topics of the syllabus.

1. To study the introduction of laying and marking of a pattern on the fabric.
2. To study the cutting of a paper pattern.
3. To study the different forms of spreading
4. To study a garment unit regarding all the processes from the design conception to the shipment of the garment.
5. To collect different fabric swatches and study various spreading and laying methods for them.
6. To conduct a market survey on labels attached to various units.

7. The students are required to go the garments industry and get a project which can be laying any department in the industry like sewing finishing cutting etc.

The project finally has to aim at increasing the productivity.
(20 marks will be allocated to this during the practical examination)

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