TE 3rd / Lib

Roll No. ..... Total Pages : 03

BT-3/D-23 **43185**

YARN MANUFACTURING

PCC-TEX-203A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What do you mean by Mixing ?

(b) What is Blending ?

(c) Define Opening.

(d) What do you understand by Cleaning ?

(e) What do you mean by Carding ?

(f) Define Comber.

(g) What do you mean by Tinting ?

(h) What is Drawing ?

(i) Define Autoleveller.

(j) What do you mean by Blowroom ?

(k) What do you mean by Draft Irregularities ?

(l) What are Lap Defects ?

(m) What do you mean by Flock Feed System ?

(n) What is Ideal Drafting ?

(o) Define Card Clothing. 1×15=15

Unit I

2. What are the objectives of Mixing ? With the help of neat diagram, explain the different types of mixing of Cotton fibres. Compare between Mixing and Blending. **15**

3. What are the objectives of Blending ? With the help of neat diagram, explain the different types of Blending of Cotton and Synthetic fibres. Mention the different parts of Blending Machine and their functions. **15**

Unit II

4. What are basic concepts of Opening ? With the help of suitable diagrams, discuss the Opening of Cotton fibres. Mention the different parts of Openers and their functions. **15**

5. What are the objectives of Cleaning ? Mention different types of Cleaning Machines. With the help of suitable diagrams, Explain the Cleaning of Cotton and Man-made fibres in a Blowroom Line. **15**

Unit III

6. What do you understand by Carding ? With the help of neat diagram, explain the principle of Carding, Stripping and Brushing operation in a Carding Machine. **15**

7. What is High Speed Card ? With the help of suitable diagrams, explain the passage of material through a Carding Machine. Mention the different parts of Carding Machine and their functions. **15**

Unit IV

8. What are the different types of Drafting systems ? With the help of neat diagrams, compare Conventional and Modern Drafting systems. **15**

9. With the help of neat diagram, explain the function of Drawing Department . What are the various types of Drafting rollers are used in Drawing machine. How is total draft calculated in a Drawing machine, using own data ? **15**

Roll No. ..... Total Pages : 03

BT-3/D-23 **43186**

FABRIC MANUFACTURING
PCC-TEX-205A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What do you mean by Winding ?

(b) What is Warping ?

(c) Define Sizing.

(d) What do you understand by Drawing-in ?

(e) What do you mean by Weaving ?

(f) Define Handloom.

(g) What do you mean by Pirn Winding ?

(h) What is Shedding ?

(i) Define Picking.

(j) What do you mean by Healds ?

(k) What do you mean by Beating Up ?

(l) What are Secondary motions ?

(m) What do you mean by Reed ?

(n) What is Yarn Clearer ?

(o) Define Stretch in Sizing. **15×1=15**

Unit I

2. What are the objectives of Winding ? With the help of neat diagram, explain the passage of yarn through Winding Machine. Mention the different parts of Winding Machine and their functions. **15**

3. What do you mean by Yarn Tensioner ? With the help of suitable diagram, explain the different types of Yarn Tensioners ? Calculate the output yarn tension of 2/32s count. Assume other data required. **15**

Unit II

4. What are basic concepts of Beam Warping and Sectional Warping ? With the help of suitable diagrams, discuss the passage of warp yarn through different warping machines. Mention the different parts of Warping Machine and their functions. **15**

5. What are the objectives of Sizing ? Mention different types of Sizing Machines. With the help of suitable diagrams ? Explain the passage of yarn through Sizing Machine. Mention different parts of Sizing Machine and their functions. **15**

Unit III

6. What do you understand by Drawing-in ? With the help of neat diagram, explain the various types of drafting. Mention drawing-in order of Plain. Twill and Sateen Weave. **15**

7. What is Loom ? With the help of suitable diagrams, Explain the passage of yarn through a Weaving Machine. Mention the different parts of Weaving Machine and their functions. **15**

Unit IV

8. What are the different types of conventional picking systems ? With the help of neat diagrams, compare Underpicking and Overpicking. Also mention the parts of the NDER Picking motion and their functions. **15**

9. With the help of neat diagram, explain the function of beating motions. What are the kinematics of sley and sley eccentricity ratio ? How sley eccentricity affects beat-up force ? Show with the help of diagram. **15**

Roll No.....

Total No. of page(s): 4

BT-3/F-24: 43187-RE

PCC-TEX-207A: Textile Chemical Processing-I

Time: 3 hours]

[Max. Marks: 75

Note: Question No. 1 is compulsory. Attempt any five questions in all selecting one from each unit. All questions carry equal marks.

Serial No.	Questions	Marks
1.	Question 1 contain 15 multiple choice question, each carry one marks 1. In cotton processing which process comes after desizing? a) Singing b) Bleaching c) Scouring d) Mercerization 2. Iodine spotting test is used to evaluate the efficiency of process? a) Scouroing b) Singeing c) Desizing d) Bleaching 3. Which impurities are removed during scouring of cotton? a) Starch b) Cellulose c) Wax & Fatty matter d) Pectin 4. Which chemical is most suitable for cotton fabric bleaching? a) Potassium permanganate b) Hydrogen peroxide c) sodium hydroxide d) Sodium chlorite 5. Hydrogen peroxide bleaching is done at pH? a) 10 – 11 b) 4 – 5 c) Neutral d) 8 – 9 6. Sodium hypochlorite bleaching is done at temperature? a) 80° – 90°C b) 20° – 30°C	

c) 30° – 40°C
d) 60° – 70°C

7. Mercerization process is done for the type of fabric?
a) Polyester
b) Nylon
c) Cotton
d) Viscose Rayon

8. Which desizing process is the most commercial?
a) Rot steeping
b) Enzyamtic desizing
c) Oxidative desizing
d) Acid desizing

9. Which enzyme is used for the desizing of cotton fabrics?
a) Amylase
b) Cellulase
c) Pectinase
d) Protease

10. Heat setting process is done for?
a) Whiteness
b) Lusture
c) Improve dyeability
d) Dimension stability

11. Which class of dye needs reduction & solubilization?
a) Disperse dyes
b) Sulphur dyes
c) Reactive dyes
d) Acid dyes

12. Which dyes are most suitable for the colouration of cotton fabric?
a) Acid dyes
b) Basic dyes
c) Direct dyes
d) Reactive dyes

13. Wool fabric is scoured with the chemical?
a) Sodium hydroxide
b) Soda ash

	c) Hydrogen peroxide d) Starch 14. Which machine is suitable for the dyeing of polyester fabric? a) Soft-flow dyeing machine b) Jet dyeing machine c) Jigger d) Kier 15. Silk degumming involve the removal of? a) Inorganic matter b) Cellulose c) Sericin d) Fibroin	1×15 = 15
	Unit-I	
2.	(a) Discuss the different types of impurities present in the cotton textiles. Give a flow chart for the process sequence for chemical processing of cotton fabrics. (b) Explain the concept of gas singeing with neat & clean machine diagram.	7+8 =15
3.	(a) What are the different types of desizing processes, explain them? (b) Explain the Kier scouring process with machine diagram and technical details.	8+7 =15
	Unit-II	
4.	(a) Explain the hydrogen peroxide bleaching process for cotton textiles with recipe and controlling parameters involved. (b) Write the details of mercerization process and discuss the physical & chemical changes takes place in cotton during mercerization.	7+8 =15
5.	(a) Discuss the process of heat setting with different methods of heat setting. Also give details on the heat setting of different fibres. (b) Explain the concept of barium activity number and explain how the degree of set is evaluated after heat setting.	7+8 =15

	Unit-III	
6.	(a) Give classification of dyes based on the suitability to textile materials. Explain the concept of reactive dyes with their types and mechanism of application. (b) Explain the application of Vat dyes on cellulosic textiles with all technical details and reaction mechanism.	**7+8 =15**
7.	(a) Explain the working principle of Jigger dyeing machine with neat & clean diagram. (b) Write short note on the application of disperse dyes on polyester.	**7+8 =15**
	Unit-IV	
8.	Discuss the process sequence for the chemical processing of wool and write details on the setting of wool with its types, technical details and suitable diagram.	**15**
9.	Write a short note on the following: (a) Wool milling (b) Silk degumming	**7+8 =15**

Roll No. ..... Total Pages : 03

BT-3/D-23 43215

UNIVERSAL HUMAN VALUE-II : UNDERSTANDING HARMONY

HTM-901A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all selecting at least *one* question from each Unit.

Unit I

1. (a) 'There is an essential complementarity between Values and Skills. The priority is values then skills.' Elaborate the statement. **7.5**

   (b) Explain the concept and process of Self Exploration. **7.5**

2. What do you understand by Value Education ? Describe the content and guidelines for value education. **15**

Unit II

3. Explain the concept of Imagination. Describe the possible sources of Imagination and what would be the consequences of Imagination from these sources ? **15**

4. Human being is the co-existence of the Self (consciousness) and the Body (Material). Elaborate the statement. **15**

Unit III

5. Describe the role of Justice in Relationship. How is Trust the foundational value in relationship ? Explain in detail. **15**

6. (a) Describe the various Feelings (values) in relationship. **7.5**

   (b) Disrespect arising out of Differentiation leading to Discrimination. Explain it. **7.5**

Unit IV

7. Describe the dimensions of Human Order. Explain the natural process of a child in an environment of relationship and in an environment of domination. **15**

8. (a) Describe the goals of human being living in a society. Also explain the three kinds of Obsessions. **7.5**

(b) There is interconnectedness and mutual fulfillment among the four orders in nature. Explain this statement and also describe the role of right understanding in maintaining harmony among these orders. **7.5**

Roll No. ..... Total Pages : 03

BT-3/D-23 43355

TEXTILE FIBRES-I
PCC-TEX-217A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Attempt all parts : **10×1.5=15**

(a) What is the composition of cotton fiber ?

(b) What is the numbering system of woolen yarn ?

(c) Classification of Textile fiber.

(d) What are physical properties of Spandex fiber ?

(e) What is Dry spinning system ?

(f) Enlist the Man-made fibers.

(g) What is the melting temperature of Polyester and Nylon ?

(h) How to determine the solubility of viscose fiber ?

(i) Define the crystalline and amorphous structure of fiber.

(j) What is Polymerization ?

Unit I

2. (a) Discuss the structure of cotton fiber with neat and clean diagram. Also write its physical and chemical properties. **11**

(b) Differentiate between the natural and man-made fiber. **4**

3. (a) What are the essential and desirable properties of textile fibers and their role in final end products ? **10**

(b) What is Bt cotton fiber ? Explain the properties and application of organic cotton. **5**

Unit II

4. (a) What is the composition of Bast fiber ? Explain the geographical distribution, extraction and properties of Jute fiber. **10**

(b) What are the physical properties of Sisal and Ramie fiber and its application ? **5**

5. (a) How to cultivate the silk fiber ? Explain the preparation process of silk fiber and its types. **10**

(b) What is the composition of Silk fiber ? Also write its physical and chemical properties. **5**

Unit III

6. (a) Enlist the Impurities in Raw wool fiber and also explain process involved in the removal of impurities from Raw wool fiber. **10**

(b) Explain the physical and chemical properties of wool fiber. **5**

7. (a) What are the essential properties of fiber forming polymer ? Explain the general principle of melt spinning system. **10**

(b) Differentiate between the woolen and worsted fiber. **5**

Unit IV

8. Brief outline the manufacturing process of Polyester, Viscose, and polypropylene fibers and also their properties and end use. **15**

9. What do you mean by technical specialty fiber ? Explain the flow chart of manufacturing the aramid fiber and also its physical and chemical properties and end uses. **15**

TE 5th/Lib

Roll No. ..... Total Pages : 03

BT-5/D-23 **45214**

TEXTILE TESTING–I

PCC-TEX-301A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Attempt all parts : **10×1.5=15**

(i) What is the Atmospheric Condition for texting of textile ?

(ii) What do you mean by the Random Sampling in testing ?

(iii) How do measure the Cotton Maturity ?

(iv) Define the Fibre Quality Index.

(v) What is the full form of HVI and AFIS ?

(vi) Which all properties of cotton fibre measure by HVI Tester ?

(vii) What is Absolute humidity and relative humidity ?

(viii) Describe the Force Elongation curve.

(ix) What are the types of electronic yarn clearer system ?

(x) What do you mean by U% ?

Unit I

2. (a) Why do we need of texting for textile ? Define the techniques of sampling for cotton fibers used in textile industry. **10**

   (b) How do you measure Moisture regain and Moisture content of textile fiber ? **5**

3. (a) Discuss the working principle of Shirley Moisture Meter with diagram. And also discuss the factors which affect Moisture regain of textile fibers. **10**

   (b) Discuss effect of moisture on strength properties of cotton and wool fiber. **5**

Unit II

4. With a suitable diagram, show the working principle of fibre fineness by Air flow meter. And also explain the methods of measuring the fibre fineness. **15**

5. What are the salient features of HVI, AFIS, Nep count used for measuring the properties of cotton fibres and also working principle of stelometer with diagram ? **15**

Unit III

6. What are the causes of Yarn Irregularities and how do measure the twist in plied yarn ? Explain it. Also define the Yarn numbering system. **15**

7. What are the salient features of Uster Evenness tester ? And also with suitable diagram, Discuss the measuring principle of capacitive type yarn fault tester with Yarn fault classimat system. **15**

Unit IV

8. Discuss with a neat sketch the effect of twist on tensile strength of a yarn. Discuss the working principle of CRE, CRT and CRL testing device. **15**

9. (a) Define the following terms : **4×2=8**
   (i) Initial modulus
   (ii) Span length
   (iii) Work Factor
   (iv) Work of rupture.

   (b) Discuss working of Single yarn strength tester with diagram. **7**

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BT-5/D-23 45215

YARN MANUFACTURING-III
PCC-TEX-303A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Attempt all parts : **15×1=15**

(i) Twisting potential is the highest in :

(a) Friction spinning (b) Rotor spinning

(c) Air jet spinning (d) Ring spinning

(ii) Two jets in MJS system increase :

(a) Yarn tenacity

(b) Yarn evenness

(c) Yarn imperfections

(d) Yarn diameter

(iii) Ticket no. is used for what ?

(a) Compact yarn (b) Channelle yarn

(c) Sewing yarn (d) Slub yarn

(iv) Maximum migration of fiber will be for ?

(a) Ring (b) Rotor

(c) Air jet (d) Friction

(v) Cone spun yarn can be produced on ?

(a) Ring (b) DREF III

(c) DREF II (d) Rotor

(vi) Which is not a compact spinning system ?

(a) ELITE (b) ROCOS

(c) MVS (d) COM 4

(vii) Lowest noise level in which spinning system ?

(a) Ring (b) Friction

(c) Rotor (d) Air jet

(viii) Which yarn are having highest stiffness ?

(a) Ring yarn (b) Compact yarn

(c) Friction yarn (d) Wrap yarn

(ix) What is adhesive spinning system ?

(x) Why two jets are used in air jet machine ?

(xi) Enlist the kinds of Fancy Yarn.

(xii) Which one type of twist is used for Sewing thread.

(xiii) What is the purpose of Yarn ballooning system ?

(xiv) What is TNO ?

(xv) Enlist the properties of Compact yarn.

Unit I

2. (a) What are the limitations of Ring Spinning System ? And write down the modernization on Ring Spinning. **10**

(b) Differentiate between the Ring Spinning and Rotor Spinning. 5

3. (a) Discuss the working principle of Open end spinning with neat and clean diagram with its merits. 10

(b) Briefly describe the factors affecting spinning tension in Ring spinning. 5

Unit II

4. (a) With a suitable diagram, show the passage of material through a Rotor spinning machine. 10

(b) Briefly explain the parts of the Rotor spinning machine and the structure of the rotor spun yarn with diagram. 5

5. (a) Compare the structure and properties of air jet spun and ring spun yarn. 5

(b) Discuss the principle of yarn formation in air jet spinning with diagram. 10

Unit III

6. (a) Explain the working principle of Friction spinning machine with neat and clean diagram with its advantages and disadvantages. 10

(b) How does DREF III system differ from DREF II and DREF I spinning system. 5

7. With suitable diagram, explain the working principle of Electrostatic spinning machine with its advantages over Ring spinning system and also end uses of Wrap spun yarn and its structure with diagram. **15**

Unit IV

8. (a) Give a comparative assessment of Yarn structure, Properties and end uses of Ring, Rotor and Air jet spun yarn. **10**

   (b) Describe any *two* techniques of producing the fancy yarn. **5**

9. (a) Enlist the properties required for sewing thread. **5**

   (b) Explain the different methods of fiber compacting and properties of compact yarn. **10**

Roll No. ..... Total Pages : 04

BT-5/D-23 **45216**

FABRIC MANUFACTURING-III

PEC-TEX-305A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

1. (i) Which one of these looms are preferred with jacquard ? **1**

(a) Air jet looms

(b) Water-jet

(c) Multi-phase

(d) Rapier

(ii) One of the selvedge of the fabric is of conventional type on : **1**

(a) Projectile Loom

(b) Rapier (Dewas Type)

(c) Rapier (Gabler Type)

(d) Multiphase

(iii) Maximum number of weft colors can be woven by : **1**

(a) Air jet looms

(b) Water-jet

(c) Multi-phase

(d) Rapier

(iv) Which of the product not used the nonwoven ? **1**

(a) Apparel

(b) Membrane

(c) Carry beg

(d) None of the above

(v) On a Sulzer projectile loom, the number of projectiles depends upon the : **1**

(a) Projectile mass

(b) Torsion bar arrangement

(c) Loom width

(d) Projectile arrangement

(vi) Define Fabric Selvedge. **2**

(vii) Compare between DEWAS and GABLER Systems. **2**

(viii) What do you mean by TORSION BAR ? **2**

(ix) What do you understand by Flexible Rapiers ? **2**

(x) What is Take-Up motion ? **2**

Unit I

2. (a) Discuss the merits and demerits of shuttle-less looms over the shuttle looms. **3**

   (b) Discuss the different types of selvedges formed in shuttle-less looms. Also mention their key features. **12**

3. What are the basic principles of Projectile Weaving ? With the help of neat sketches, explain the shedding, picking and beating- up techniques that are incorporated in Projectile Weaving. **15**

Unit II

4. (a) Make a classification chart of the Rapier looms with respect to techniques of insertion and types. **10**

   (b) Explain with neat sketches the principle of weft insertion in a Dewas rapier loom. **5**

5. What are limitation of air-jet weavings ? How are these looms responsible in producing woven fabrics ? With the help suitable examples and neat sketches, explain the principles of Weft Insertion through air-nozzles. Also discuss the importance of Profile Reed in Air-Jet looms. **15**

Unit III

6. (a) Discuss the merits and demerits of water jet weaving looms. **5**

   (b) Explain the working principle and the sequence of the weft insertion in a modem water jet loom with the help of suitable diagrams. **10**

7. What are Multi-phase Weaving ? How does it differs with Single Phase Weaving ? With the help of neat sketches, discuss the manufacturing techniques in weft-way Multiphase Weaving. Also explain merits and demerits of weft-way and warp-way Multiphase Weaving. **15**

Unit IV

8. (a) Describe in brief the process of needle punched fabric formation with suitable diagrams. **8**

   (b) Discuss the factors affecting punch density of needle punched fabric. **7**

9. What are the different methods of Web preparation techniques ? With the help of neat diagram, explain the manufacturing process of Parallel -laid and Cross-laid Web formations. Also discuss the effect of fibre properties on web formation techniques. **15**

Roll No. ..... Total Pages : 03

BT-5/D-23 **45217**

FABRIC STRUCTURE AND DESIGN
PCC-TEX-307A (Opt.-2)

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks. Graph paper may be provided on request.

Unit I

1. (a) What do you understand by physical basics of color ? Illustrate your answer with the help of suitable examples. 4

   (b) What are the cool and warm colors ? Illustrate it with suitable example. 4

   (c) What are the various techniques of color measurement ? With the help of suitable diagram, explain at least one method of color measurement. 7

2. (a) Explain *two* theories of color mixing with the help of suitable examples. 7

   (b) Discuss different types of modification of color. 4

   (c) Discuss briefly the application of colors. 4

Unit II

3. (a) What is the Zig-Zag twill weave and also make suitable design zig-zag with explain. **8**

   (b) What is the diamond twill weave and also make suitable design diamond with explain (use 4/4 twill). **7**

4. (a) What is the Broken twill and also make suitable design produce entering and skipping method (use 2/2 Twill) ? **6**

   (b) What the hopsack weave ? Also make suitable design hopsack weave is with explanations. **6**

   (c) What is the steep and flat twill and mention effect of twist on prominence of twill line ? **3**

Unit III

5. (a) What is the satin and sateen weave ? Explain characteristics weave. **3**

   (b) Explain 5 end satin and sateen with a suitable weave design. **4**

   (c) What is huck a back weave and make suitable weave design ? **4**

   (d) What is mock leno weave and make suitable weave design ? **4**

6. (a) What is the bed ford cord weave and classification and also make suitable design twill faced bed ford cords. **8**

(b) What is the honey comb weave and make suitable design with explain. 7

Unit IV

7. (a) What is the Extra warp and weft figuring and basic requirement and also make suitable design produce figuring with extra weft double color. 8

(b) What is the velveteen fabrics and also make suitable design Warp piled fabrics - velvet with twill use (3/1twill). 7

8. (a) What is the double cloth fabrics and classification of double cloth fabrics explain with figure, make suitable double cloth (combination stitching) weave design. 8

(b) What is the wadded double cloth and make suitable weft wadded double cloth design ? 7

TE Th/Lab

Roll No. ..... Total Pages : 7

BT–7/D-23 **47330**

TECHNICAL TEXTILES–I

Paper–PCC–TEX–401A

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following multiple choice questions : 15×1=15

(i) What is the Primary focus of technical textiles?

(a) Aesthetics and fashion.

(b) Functional performance and applications.

(c) Traditional textile manufacturing.

(d) Historical textile preservation.

(ii) Which of the following is NOT a classification of technical textiles?

(a) Medical textiles.

(b) Fashion textiles.

(c) Agro textiles.

(d) Industrial textiles.

(c) Aesthetic enhancement.

(d) Thermal regulation.

(xi) Which of the following is NOT a type of application for automotive textiles?

(a) Textiles in passenger cars.

(b) Textiles in airbags.

(c) Textiles in food packaging.

(d) Textiles in marine vehicles.

(xii) What are the essential properties that automotive textiles should possess for applications in the automotive industry?

(a) Softness and Breathability.

(b) Durability, flame resistance and UV resistance.

(c) Bright colors and High gloss.

(d) Low cost and High availability.

(xiii) Which type of Textile is commonly used in automotive Airbags and Seatbelts?

(a) Non-woven textiles.

(b) Woven textiles.

(c) Knitted textiles.

(d) Embroidered textiles.

(b) Filtration parameters and filtration theory.

(c) Textile printing techniques.

(d) Sewing machine maintenance.

(vii) What is the concept of pore size and particle size related to in technical textiles?

(a) Yarn construction. (b) Filament count.

(c) Fabric durability. (d) Filtration efficiency.

(viii) Which type of filter media is designed to capture particles at the nanoscale?

(a) Micro filters. (b) Ultra-fine filters.

(c) Nano filters. (d) Macro filters.

(ix) Which criteria are important for selecting fibers and fabrics for geotextile applications?

(a) Fiber length and Fabric color.

(b) Fabric thickness and Fabric pattern.

(c) Fiber and fabric strength and Durability.

(d) Fabric price and Availability.

(x) What are the Primary functions of Geotextiles in construction and Civil engineering?

(a) Insulation and Soundproofing.

(b) Filtration, reinforcement and drainage.

(iii) Which characteristic is essential for technical fibers?

(a) Color fastness. (b) Breathability.

(c) High tensile strength. (d) Softness.

(iv) What is the role of Fabric construction in technical textiles?

(a) It determines the textile's color.

(b) It affects the durability and functionality of the textile.

(c) It influences the textile's historical significance.

(d) It has no impact on technical textiles.

(v) How do technical textiles differ from traditional textiles?

(a) Technical textiles are only used for fashion purposes.

(b) Technical textiles are always made from natural fibers.

(c) Technical textiles have specific functional properties.

(d) Technical textiles are less durable than traditional textiles.

(vi) What are the essential elements of dry and wet filtration that need to be understood for technical textiles?

(a) Fiber dyeing methods.

(xiv) What are the Primary elements involved in the mechanics of reinforcement, filtration and drainage by Geotextiles?

(a) Fiber count and Fabric thickness.

(b) Fiber strength, Fabric construction and Pore size.

(c) Fabric color and Texture.

(d) Weaving pattern and Yarn count.

(xv) Which of the following is a major factor influencing the selection of filter media in dust collection and solid-liquid separation?

(a) Yarn color. (b) Fabric texture.

(c) Filtration efficiency. (d) Fiber diameter.

UNIT–I

2. Differentiate between conventional and Technical textiles. Discuss the brief classification of Technical textiles. Explain the suitability of specialty fibers in Technical textiles with their application area. 3,4,8

3. What makes Textile materials useful for technical applications? Highlight the role of yarn construction, fabric construction and composite materials in the production of Technical textiles. 5,10

UNIT–II

4. (a) Discuss the principles of filtration, including dry and wet filtration, filtration parameters and the theory of Dust collection and solid-liquid separation. 6

   (b) Explain the key requirements for effective filtration processes and the role of fibre materials, fabric construction and finishing treatments in enhancing filtration performance. Explore the concepts of pore size and particle size and their significance in filtration. 9

5. (a) Discuss the various types of Nonwoven filter media available in the market and explain the advantages and disadvantages of different Nonwoven filter materials, including their applications in Air and Liquid filtration. 7

   (b) Explain the methods and equipment used to test the performance and quality of filter fabrics, emphasizing the key parameters measured. 8

UNIT–III

6. Explain the scope and definition of Geotextiles and discuss the various types of Geotextiles and their respective uses in Civil engineering and other applications. Highlight the technological considerations in selecting materials for Geotextiles with specific reference to River embankments and Earthquake proofing. 7,8

7. (a) Give a brief account of technical details of particle size and pore size distribution for hydraulic application. How do you assess the performance of geotextiles? 7

(b) Delve into the topic of Natural fibre geotextiles, discussing the characteristics, applications, and benefits of using natural fibers in geotextile products. 8

UNIT–IV

8. Comment on the suitability of different fibres for automotive textiles. Enlist the requirements of Seatbelts and Airbags and also discuss the suitability of fibres of them. 15

9. Write a short note on following :

(a) Manufacturing of Tyre cords. 7

(b) Application in Aircrafts. 8

Roll No. ..... Total Pages : 3

BT–7/D-23 **47331**

ADVANCED CHEMICAL PROCESSING

Paper–PCC–TEX–403A

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions : 10×1½=15

   (a) Define the L, A, B.

   (b) What is HTHP Dyeing machine?

   (c) What is Sublimation?

   (d) What are the different standards for Whiteness Index?

   (e) Which all source of lights used in Color Matching Cabinet?

   (f) Enlist the advantages of Ink Jet Printing.

   (g) Define the Hot-Pressing treatment.

   (h) How to determine the Fastness of Perspiration on Polyester?

(i) Which kind of finish used for give the Water Proof on fabric surface ?

(j) Differentiate between the Water Proof and Water Repellent.

UNIT–I

2. Explain the Mechanism with recipes of Disperse dye on Polyester fiber and also describe grading and methods of Fastness properties on Polyester. 15

3. What is Enzyme? Enlist the types of Eco-friendly Enzymes in Wet Processing. And also explain the Mechanism of Super Critical CO_2 dyeing. 15

UNIT–II

4. Describe the Mechanism of Digital Noval Printing technique and also its Merits and Demerits. 15

5. (a) Explain the Breathable Water Proof fabric and also describe how to make this fabric. 7

(b) Discuss the Wet Pickup techniques used in Textile processing and its application and mertis. 8

UNIT–III

6. State the Colorimeters is based on Beer-Lambert law. Describe the source of Natural and Artificial light and its application. 15

7. Write notes on the following : 15

(a) Tristimulus values.

(b) Chromaticity coordinates.

(c) Metamerism.

UNIT–IV

8. Give the steps of recipe prediction using Computer Added Color Matching function. 15

9. What is Munsell system of Color Specification? Describe the principle of Spectrophotometer and its application area with suitable diagram. 15

Roll No. ..... Total Pages : 4

BT–7/D-23 **47333**

PROCESS CONTROL IN GARMENT

Paper–PEC–TEX–411A

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions : $10\times1\frac{1}{2}=15$

(i) Which of the last Operation in shirt stitching?

(a) Pocking attaching. (b) Collar attaching.

(c) Hemming. (d) Making button holes.

(ii) What is the Sleeve crown?

(a) Midpoint of front and back.

(b) Midpoint of sleeve.

(c) Midpoint of bottom.

(d) Highest point of sleeve.

(iii) What is BR refers in pattern making?

(a) Body round. (b) Body rise.

(c) Bottom round. (d) Bicep round.

UNIT–III

6. (a) What is the numbering system for needle and most commonly used needle number? 5

   (b) What is he Quality parameter for assessing sew-ability? 5

   (c) What is the method of needle cutting garments ? 5

7. (a) What is the difference between spun thread core spun thread? 5

   (b) How do you inspect quality of sewing threads? 6

   (c) What is threading in construction and type? 4

UNIT–IV

8. (a) Write a note on control chart, fish bone diagram, scatter plots, histogram and six-sigma. 10

   (b) Define the Quality control and Quality assurance and control method. 5

9. (a) What do you mean by Inspection and also explain the types of inspections? 5

   (b) What are the steps in the inspection process? With examples. 5

   (c) What is the different Quality control process in Garments industry? 5

(x) Which is a fabric band at the bottom of the sleeve?

(a) Cuff. (b) Placket.

(c) Pleat. (d) Hem.

UNIT–I

2. (a) Define the Automation in Garment industry its and classification in detail. 6

(b) Write short note Embroidery, programmable machine quantitative production analysis. 9

3. (a) Write down the latest machinery design in development. 5

(b) Difference between the ergonomics in apparel industry and production in the Garment technology. 10

UNIT–II

4. (a) What is the improvement of puckering due to structural jamming? Illustrate. 7

(b) Difference between the puckering and dimensional stability and what is the problem with stitch formation? 8

5. (a) What are the Quality standard of seam? And what are causes seam failure? 8

(b) Which type of seams is most commonly seen in knit active wear? 7

(iv) Which garment has Churi at bottom?

(a) Salwar. (b) Semi Patiala.

(c) Patiala. (d) Churidar.

(v) How many cut components in basic kameez?

(a) 4 (b) 6

(c) 3. (d) 5.

(vi) What are the basic purposes of using canvas?

(a) Protection. (b) Shape.

(c) Strength. (d) Decoration.

(vii) Which bottom hole is embossed?

(a) Corded. (b) Keyhole.

(c) Fan. (d) Shaped.

(viii) Which button hole is suitable for shank buttons?

(a) Piped. (b) Box.

(c) Keyhole. (d) Bound.

(ix) What is Lay ?

(a) Arrangement of component.

(b) Arrangement of sewing materials.

(c) Arrangement of fabric.

(d) Arrangement of pattern.

Roll No. ..... Total Pages : 2

BT–7/D-23 **47335**

FUNDAMENTAL OF MANAGEMENT

Paper–OEC–TEX–415A

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer any **five** of the following questions : 5×3=15

   (a) Explain the Capital structure.

   (b) Function of management.

   (c) International Marketing.

   (d) Job analysis.

   (e) Source of finance.

   (f) What are Operative functions?

   (g) Define the Work measurement.

UNIT–I

2. Write short notes on the following :

   (a) Capital structure. 8

   (b) Financial management. 7

3. Discuss the Duties and Responsibilities of Finance executive? 15

UNIT–II

4. Briefly explain importance and functions of Personnel management. 15

5. What do you mean by Human resource? Discuss the functions of Human resource development. 15

UNIT–III

6. What is Plant layout? Explain the factor affecting Plant layout. 15

7. Define the Production control. Explain the steps involved in Production control. 15

UNIT–IV

8. What is Marketing management? Discuss the role of marketing in economic development. 15

9. Explain the Marketing mix. Explain the 4Ps of marketing mix detailed. 15