R1851

Sub. Code
2MF1C1

M.Voc. DEGREE EXAMINATION, NOVEMBER – 2024

First Semester

Fashion Technology

ADVANCED TEXTILE SCIENCE

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Which of the following is a form of rayon? (CO1, K1)

   (a) Soyabean (b) Lyocell

   (c) Bamboo (d) Hemp

2. Alumina and silica are _____material. (CO1, K1)

   (a) Glass (b) Carbon

   (c) Ceramic (d) Alginates

3. Equalizing, parallelizing, blending are the tasks of (CO2, K1)

   (a) Blow room (b) Draw frame

   (c) Carder (d) Comber

4. Which of the following spinning results in a higher packing density of the fibers, leading to stronger and more uniform yarns? (CO2, K1)

   (a) Air vortex (b) Friction

   (c) Rotor (d) Compact

5. Which of the primary mechanism separates the warp threads into two layers? (CO3, K1)

(a) Shedding (b) Picking

(c) Beating up (d) Letting off

6. Name the process eliminated in shuttleless looms is (CO3, K1)

(a) Warping

(b) Sizing

(c) Denting in

(d) Pirn winding

7. Choose the weft knitting structure (CO4, K1)

(a) Milanese (b) Tricot

(c) Raschel (d) Rib

8. Knitting is the process of manufacturing fabrics by _____ of yarns. (CO4, K1)

(a) Interlacing

(b) Interlooping

(c) Interfering

(d) Interconnecting

9. Which of the following is stronger? (CO5, K1)

(a) Air laid (b) Wet laid

(c) Spun bonded (d) Cross laid

10. _____ is made by interweaving three or more stands, strips, or lengths in a diagonally overlapping pattern. (CO5, K1)

(a) Crocheting (b) Knitting

(c) Braiding (d) Weaving

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Outline about Alginate fibers. (CO1, K2)

Or

(b) Outline about any one elastomeric yarn. (CO1, K3)

12. (a) Explain the processes in a blow room. (CO2, K2)

Or

(b) Describe the properties and uses of air vortex spun yarns. (CO2, K2)

13. (a) Define a shuttle less loom and compare it with a shuttle loom. (CO3, K3)

Or

(b) Describe the weft insertion system in a rapier loom. (CO3, K3)

14. (a) Discuss about the recent developments in knitting. (CO4, K4)

Or

(b) Outline about socks knitting technology. (CO4, K3)

15. (a) Define and classify Non woven's. (CO5, K3)

Or

(b) Write a note on braiding. (CO5, K2)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1,000 words each.

16. (a) Explain the properties and end uses of Kevlar fibers. (CO1, K2)

Or

(b) Analyze about sustainable fibers. (CO1, K4)

17. (a) Outline the methods of comber lap preparation. (CO2, K3)

Or

(b) Outline the principle of yarn formation in rotor spinning. (CO2, K4)

18. (a) Explain the working principle of water jet loom and air jet looms. (CO3, K3)

Or

(b) Explain in detail the working of a Projectile loom. (CO3, K3)

19. (a) Illustrate the loop formation on single jersey and rib knitting machine. (CO4, K4)

Or

(b) Elaborate on Automatic V bed flat knitting machine. (CO4, K4)

20. (a) Compare dry laid and wet laid method of web formation. (CO5, K5)

Or

(b) Discuss the latest developments in Non woven Industry. (CO5, K4)

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R1852

Sub. Code
2MF1G1

M.Voc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Fashion Technology

HISTORIC, WORLD COSTUME AND TEXTILE

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Name the ornamented kilt worn by Mesopotamian men and women (CO1, K1)

   (a) Chiton (b) Kaunakes

   (c) Himation (d) Peplos

2. Which of the following was preferred by the upper class people of Babylonia? (CO1, K1)

   (a) Umbrella shaped garments

   (b) Fringed brightly coloured clothes

   (c) Sleeveless costumes

   (d) Cold shouldered outfit

3. Identify the fiber that was used to make most of the Egyptian clothing (CO2, K1)

   (a) Cotton (b) Wool

   (c) Linen (d) Silk

4. Name the French costume that consists of a white blouse, black skirt and red shawl (CO2, K1)

(a) Alsace (b) Breton

(c) Le smocking (d) Antoinette

5. Which of the following colours are observed in Swedish costume? (CO3, K1)

(a) Red and green (b) Blue and red

(c) Blue and yellow (d) Yellow and green

6. Dirndl is worn in (CO3, K1)

(a) France (b) Italy

(c) Germany (d) Rome

7. Obi is a (CO4, K1)

(a) Top (b) Skirt

(c) Waist band (d) Jewellery

8. Name the country that has Hanbok as a national costume (CO4, K1)

(a) Malaysia (b) China

(c) Burma (d) Korea

9. Name the floor-length garment worn by men and women in arab peninsula that pulls over the head and has no buttons or zippers. (CO5, K1)

(a) Gutra (b) Serwal

(c) Shumag (d) Thobe

10. Which country reminds you of cow boy attire? (CO5, K1)

(a) Africa (b) England

(c) America (d) Middle east

Part B (5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) Write a note on 'dress for protection. (CO1, K2)

Or

(b) Outline about the body decoration and ornamentation before evolution of costumes. (CO1, K4)

12. (a) Describe a chiton and peplos. (CO2, K2)

Or

(b) Highlight the French costumes during renaissance. (CO2, K3)

13. (a) Describe the costumes of Italy. (CO3, K2)

Or

(b) Discuss about the costumes worn in Germany. (CO3, K4)

14. (a) What are the costumes used by men and women in Srilanka? (CO4, K2)

Or

(b) Comment on the costumes used in Pakistan. (CO4, K3)

15. (a) Describe the costumes of East Africa. (CO5, K2)

Or

(b) Explain the costumes of Nigeria. (CO5, K3)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Elaborate on the discovery of natural fibers and development of garment styles. (CO1, K5)

Or

(b) Describe the Babylonian costumes. (CO1, K4)

17. (a) Explain the traditional costumes of Egypt. (CO2, K3)

Or

(b) Discuss about the Roman costumes. (CO2, K5)

18. (a) Explain the Greecian costumes. (CO3, K3)

Or

(b) Elaborate on the costumes of Sweden. (CO3, K4)

19. (a) Elaborate on the female national clothing of Japan. (CO4, K4)

Or

(b) Discuss about the costumes of Burma. (CO4, K4)

20. (a) Explain the North American costumes. (CO5, K3)

Or

(b) Discuss about the female costumes of Arab peninsula. (CO5, K5)

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R1853	Sub. Code
	2MF1G2

M.Voc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Fashion Technology

ECO TEXTILES AND SUSTAINABILITY

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct options.

1. ———————— refers to the ability of a system, process, or practice to be maintained or continued over a long period without causing significant negative impacts on the environment, society, or economy. (CO1, K1)

   (a) Sustainable (b) Marketable

   (c) Profitable (d) Manifestable

2. An ———————— identifies products or services proven environmentally preferable overall, within a specific product or service category. (CO1, K1)

   (a) Eco walk (b) Ecolabel

   (c) Eco standard (d) Eco method

3. ———————— a preferential rotting process to separate the fibre from woody stem without damaging the fibre cellulose. (CO2, K3)

   (a) Rotting (b) Boiling

   (c) Retting (d) Steaming

4. ———————— also called coconut fibre, is a natural fibre extracted from the outer husk of coconut, and used in products such as floor mats, doormats, brushes. (CO2, K3)

(a) Silk (b) Jute

(c) Linen (d) Coir

5. In ————————, it is the process of mordanting the fabric before dyeing in a separate condition. (CO3, K4)

(a) pre-mordanting (b) Simultaneous

(c) Post-mordanting (d) Meta mordanting

6. ———————— the property of dyes and it is directly proportional to the binding force between photochromic dye and the fibre. (CO3, K4)

(a) Perspiration (b) Wash fastness

(c) Dye fastness (d) Colour fastness

7. ———————— is dyed entirely with herbal extractions, without using any sort of chemicals. (CO4, K5)

(a) Herbal Textile (b) Natural textiles

(c) Ecotextile (d) Ayur textiles

8. ———————— is any substance (usually a gas) whose atoms have one or more electrons detached when heat is applied and therefore become ionised. (CO4, K5)

(a) Plasma (b) Enzyme

(c) Foam (d) Glow

9. Transforming many appropriate items as possible into new things is. (CO5, K2)

(a) Reduce (b) Reuse

(c) Recycle (d) Rearrange

10. The act of taking something no longer in use and giving it a second life and new function (CO5, K2)

(a) Upcycling (b) Reusing

(c) Recycling (d) Reproducing

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Describe the need for eco textiles. (CO1, K1)

Or

(b) What are the European regulation on toxic dyes? (CO1, K1)

12. (a) Classify the types of minor fiber and explain anyone extraction method. (CO2, K3)

Or

(b) Explain the extraction process of Jute. (CO2, K3)

13. (a) Classify the types of plant dyes with examples. (CO3, K4)

Or

(b) Discuss the characteristics of Natural Dyes. (CO3, K4)

14. (a) Explain the need for natural finishes. (CO4, K5)

Or

(b) Examine how foam technology can be utilized to adopt eco-friendly methods? (CO4, K5)

15. (a) Illustrate the importance of sustainable fashion. (CO5, K6)

Or

(b) Explain few sustainable brands available in fashion industry. (CO5, K6)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Describe production ecology, Human and disposal ecology. (CO1, K1)

Or

(b) What is eco-auditing and eco-labelling? (CO1, K1)

17. (a) Explain the extraction process of any four major fiber used in textiles. (CO2, K3)

Or

(b) Identify the recent natural fibers present in textile industry. (CO2, K3)

18. (a) Develop the procedure to dye pomegranate using pre, simultaneous and post mordanting techniques. (CO3, K4)

Or

(b) Examine the colour fastness property of natural dyes and commercial dye with example. (CO3, K4)

19. (a) Examine the traditional plants and herbs used in natural finishing. (CO4, K5)

Or

(b) Distinguish between enzyme technology, foam technology and plasma technology. (CO4, K5)

20. (a) Prove how recycling and upcycling can contribute to environmental sustainability. (CO5, K6)

Or

(b) Explain the 3R's of sustainable fashion. (CO5, K6)

R1854	Sub. Code
	2MF1C2

M.Voc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Fashion Technology

APPAREL PRODUCTION PLANNING AND CONTROL

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct options.

1. The ———————— is what shows how much work has progressed and how much more needs to be done. (CO1, K1)

   (a) Timeline (b) Product

   (c) Piece (d) Value

2. A garment ———————— sheet or measurement table, is a technical document that contains all construction details of the garment. (CO1, K1)

   (a) Work (b) Specification

   (c) Material (d) Measurement

3. These layouts involve various processes and machines, but they may not be continuous. (CO2, K3)

   (a) Process layout (b) Floor layout

   (c) Plant layout (d) Industrial Layout

4. ———————— refers to the choice of region and the selection of a particular site for setting up a business or factory. (CO2, K3)

(a) Equipment layout (b) Plant layout

(c) Plant location (d) Product layout, or line

5. ———————— for apparel industries is a flexible material handling system that requires a computerized overhead transportation system to move the garment components automatically from one workstation to the next according to a pre-determined sequence. (CO3, K4)

(a) Progressive bundle system

(b) Unit production system

(c) Product bundle system

(d) Modular manufacturing system

6. ———————— are proposed to increase the flexibility of the manufacturing operation in terms of its range of function, product, and service by modularizations and its ability to be easily reconfigured in the face of changing conditions. (CO3, K4)

(a) Modular manufacturing systems

(b) Progressive bundle system

(c) Automatic system

(d) Product bundle system

7. ———————— an inventory management method in which goods are received from suppliers only as they are needed. (CO4, K5)

(a) Just-in-time production

(b) Optimized production technology

(c) Economic order quantity

(d) Inventory modelling

8. A ———————— is a project management tool that illustrates work completed over some time about the time planned for the work. (CO4, K5)

(a) Ticket order (b) Tant chart

(c) Takt chart (d) Gantt chart

9. ———————— and control manages and schedules the allocation of human resources, raw materials, work centers, machinery, and production processes. (CO5, K2)

(a) Line Balancing (b) Production planning

(c) Export balance (d) Process planning

10. ———————— is a calculation of the available production time divided by customer demand. (CO5, K2)

(a) CATK (b) Tall Time

(c) Takt time (d) GATT

Part B ($5 \times 5 = 25$)

Answer **all** questions not more than 500 words each.

11. (a) What are the duties and responsibilities of a production manager? (CO1, K1)

Or

(b) Describe the importance of Preproduction function. (CO1, K1)

12. (a) Discuss on plant site location. (CO2, K3)

Or

(b) Propose the minimum space requirement for planning a layout. (CO2, K3)

13. (a) Identify how the whole garment production system helps in the apparel manufacturing process. (CO3, K4)

Or

(b) Classify the types of spreading methods. (CO3, K4)

14. (a) Explain Optimized Production Technology (OPT). (CO4, K5)

Or

(b) Interpret how bundle control sheet helps in material management and handling. (CO4, K5)

15. (a) Illustrate the techniques of TAKT time analysis. (CO5, K6)

Or

(b) Explain how to calculate the labor requirement for an industry. (CO5, K6)

Part C ($5 \times 8 = 40$)

Answer **all** questions not more than 1000 words each.

16. (a) Describe the various pre-planning activities involved in product planning. (CO1, K1)

Or

(b) What is the specification sheet and the necessary details required in the same. (CO1, K1)

17. (a) Elaborate on the Criteria required for the evaluation of a plant layout. (CO2, K3)

Or

(b) Discuss the basic production line layout process. (CO2, K3)

18. (a) Distinguish between unit production system and modular manufacturing system. (CO3, K4)

Or

(b) Examine the flow process grids and charts. (CO3, K4)

19. (a) Determine the types of material management and handling process. (CO4, K5)

Or

(b) Explain the principles of scheduling. (CO4, K5)

20. (a) Elaborate on plant loading. (CO5, K6)

Or

(b) Summarise on the different ways of product planning. (CO5, K6)

R1855	Sub. Code
	2MF1E1

M.Voc. DEGREE EXAMINATION, NOVEMBER – 2024

First Semester

Fashion Technology

Elective – HOME TEXTILES

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Which of the following is included under home textiles? (CO1, K1)

   (a) Geo textiles (b) Mulch mat

   (c) Furnishing (d) All the above

2. Flame resistant finish is suitable for which of the following products (CO1, K1)

   (a) Towels (b) Cushions

   (c) Curtains (d) Wall Coverings

3. Which of the following refers to the brightness of colour? (CO2, K1)

   (a) Hue (b) Value

   (c) Intensity (d) Harmony

4. Which of the following is NOT true with regard to draperies? (CO2, K1)

(a) Floor length

(b) Sill length

(c) Thicker fabric

(d) Does not permit light to penetrate

5. Recognize the multilayer textile. (CO3, K1)

(a) Bolster cover (b) Mattress cover

(c) Quilt (d) Sofa Cover

6. Which of the following is true of a bedspread? (CO3, K1)

(a) Protective covering for mattress

(b) Used when bed is in use

(c) Less costly

(d) Used more for decoration purpose than covering

7. Jute is used mainly for making (CO4, K1)

(a) Wall covering (b) Floor covering

(c) Furnishing (d) Upholstery

8. Choose the size of a standard bath towel (CO4, K2)

(a) 12" × 12" (b) 17" × 30"

(c) 28" × 54" (d) 40" × 72"

9. Which of the following is used to insulate and keep things warm (CO5, K1)

(a) Mitten (b) Potholder

(c) Tea cozy (d) Table runner

10. The purpose of placemat is (CO5, K1)

(a) Protection (b) Decoration

(c) Advertisement (d) All the above

Part B (5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) Describe the major home textile production centers. (CO1, K2)

Or

(b) Brief on Antimicrobial finish and the products that require the finish. (CO1, K2)

12. (a) Outline about the accessories used in window treatment. (CO2, K2)

Or

(b) Summarize about carpet as wall covering. (CO2, K3)

13. (a) Explain cushion and cushion covers. (CO3, K2)

Or

(b) Describe about quilting. (CO3, K2)

14. (a) Discuss about the use and care of floor coverings. (CO4, K3)

Or

(b) Write a note on bath robes. (CO4, K2)

15. (a) Discuss about reversible and stone placement. (CO5, K4)

Or

(b) Write about napkins and doillies. (CO5, K2)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Assume your are going to furnish your new home. What are the factors you would consider before selection? (CO1, K4)

Or

(b) Discuss about the various furnishing materials and its types. (CO1, K4)

17. (a) Explain the types and parts of a window. (CO2, K2)

Or

(b) Summarize about the requirements, benefits and types of wall covering. (CO2, K3)

18. (a) Outline about living room furnishings. (CO3, K3)

Or

(b) Compare bed spread and bed sheet. Also discuss their use and care. (CO3, K3)

19. (a) Explain the types of carpets and their manufacturing. (CO4, K3)

Or

(b) Discuss about the production centers and market share of terry towels. (CO4, K4)

20. (a) Compile about kitchen bags and the types of stitches and seams used. (CO5, K4)

Or

(b) Explain about the types, material and manufacturing of table cloths. (CO5, K3)

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R1856

Sub. Code
2MF3C1

M.Voc. DEGREE EXAMINATION, NOVEMBER – 2024

Third Semester

Fashion Technology

TECHNICAL TEXTILES

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct answer.

1. Which of the following is NOT a classification of technical textiles? (CO1, K1)

   (a) Agrotech (b) Hometech

   (c) Meditech (d) Fibrotex

2. Name the category of technical textiles that are used for drainage and filtration (CO1, K1)

   (a) Geotextiles (b) Indu tech

   (c) Build tech (d) Agro textiles

3. Name the fiber used in technical textiles (CO2, K1)

   (a) Conventional fiber

   (b) Ultra fine

   (c) High performance organic

   (d) All the above

4. Which of the following helps withstands exposure to sunlight without damage or degradation (CO2, K1)

(a) Fire retardant (b) Water repellent

(c) UV resistant (d) Antistatic

5. What is the primary function of technical textiles in agriculture? (CO3, K1)

(a) Moisture absorption

(b) Pest control

(c) Crop protection and yield improvement

(d) Soil erosion

6. Textiles used in horticulture are categorized as (CO3, K1)

(a) Geo textile (b) Agro textile

(c) Indu tech (d) Mobil tech

7. Geo-textiles are primarily used in: (CO4, K1)

(a) Wound care (b) Soil reinforcement

(c) Clothing (d) Air filtration

8. Medical textiles used in surgery include: (CO4, K1)

(a) Antimicrobial wound dressings

(b) Crop covers

(c) Geo membranes

(d) Industrial filters

9. Which of the following is NOT a feature of military combat textiles? (CO5, K1)

(a) Thermal insulation

(b) Camouflage

(c) Infrared protection

(d) Water absorbency

10. The UV wave protection in textiles is commonly used in: (CO5, K1)

(a) Medical textiles

(b) Agro textiles

(c) Sportswear and military clothing

(d) Home furnishings

Part B (5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) Define Technical textiles and discuss its scope. (CO1, K2)

Or

(b) Describe the historical milestones in the development of technical textiles. (CO1, K2)

12. (a) Explain about ultra fine and novelty fibers used in technical textiles (CO2, K3)

Or

(b) Describe the chemical and combustion resistant fibers. (CO2, K3)

13. (a) Apply your knowledge on oeko tech and Mobi tech. (CO3, K3)

Or

(b) Enumerate the properties required of agro textiles also discuss the fibers used. (CO3, K4)

14. (a) Analyze the functions of geotextiles. (CO4, K4)

Or

(b) Apply the classification of medical textiles to design wound care products. (CO4, K3)

15. (a) Assess the thermal insulation properties of military combat textiles. (CO5, K5)

Or

(b) Evaluate the effectiveness of UV protective clothing in extreme environments. (CO5, K5)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Discuss the future growth trends of the technical textiles industry and its impact on the global textile market. (CO1, K2)

Or

(b) Explain the classification of technical textiles and their applications in various industries. (CO1, K2)

17. (a) Outline about finishing of Technical textiles. (CO2, K3)

Or

(b) Narrate about high strength and high modulus fibers. (CO2, K3)

18. (a) Elucidate about the raw materials used in sports tech and Indutech also discuss about their application. (CO3, K3)

Or

(b) Analyze about the types of aggrotech products and their applications. (CO3, K4)

19. (a) Apply geo-textiles in the design of erosion control solutions for civil engineering projects. (CO4, K3)

Or

(b) Illustrate how medical textiles can be innovated to improve surgical outcomes. (CO4, K3)

20. (a) Evaluate the effectiveness of infrared camouflage textiles in modern defense systems. (CO5, K5)

Or

(b) Critically assess the functional performance of textiles designed to protect against chemical and microbial exposure. (CO5, K5)

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R1857	Sub. Code
	2MF3C2

M.Voc. DEGREE EXAMINATION, NOVEMBER – 2024

Third Semester

Fashion Technology

TEXTILE TESTING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective questions by choosing the correct option.

1. What is the definition of relative humidity in textile testing? (CO1, K1)

   (a) The ratio of water vapor pressure to saturation pressure

   (b) The amount of moisture in the air

   (c) The moisture absorbed by fabric

   (d) The temperature of the air

2. Which instrument is used for measuring moisture regain in textiles? (CO1, K1)

   (a) Micronaire tester (b) Beesley's balance

   (c) Conditioning oven (d) Uster tester

3. The Baer sorter instrument is used to test: (CO2, K1)

   (a) Fiber fineness (b) Fiber strength

   (c) Fiber length (d) Fiber moisture

4. What method is used to test fiber maturity? (CO2, K1)
   (a) Caustic soda swelling method
   (b) Shirley analyzer
   (c) Beesley balance
   (d) Micronaire method

5. Yarn twist direction is classified as: (CO3, K1)
   (a) Z twist and S twist
   (b) Clockwise and counterclockwise
   (c) Warp and weft
   (d) Plain and twill

6. Which of the following refers to natural waviness or curvature of individual fibers within a yarn or fabric (CO3, K1)
   (a) Crease (b) Crimp
   (c) Yarn count (d) Yarn twist

7. Which of the following is tested using Bundersmann tetser? (CO4, K1)
   (a) Air permeability (b) Water permeability
   (c) Abrasion (d) Drape

8. Name the tiny knots of thread or ugly bobbles of fuzz that turn your favourite top into an unsightly mess. (CO4, K1)
   (a) Crease (b) Drape
   (c) Pill (d) Stiffmess

9. Which of the following tests measures dimensional stability in garments? (CO5, K1)
   (a) MMT Test
   (b) Spirality test
   (c) Seam strength test
   (d) Thermal study

10. Choose the equipment used to measure fabric handle (CO5, K1)
   (a) Peel bond tester (b) Alambata tester
   (c) Kawabatta tester (d) Martindale tester

Part B (5 × 5 = 25)

Answer **all** the questions not more than 500 words each.

11. (a) Explain the terms standard RH and temperature for testing. (CO1, K2)

Or

(b) Describe a conditioning oven (CO1, K2)

12. (a) Explain the principle behind determining trash and lint in cotton. (CO2, K2)

Or

(b) Discuss the role of the stelometer in determining fiber strength. (CO2, K2)

13. (a) Discuss the methods used for measuring yarn twist and its significance. (CO3, K2)

Or

(b) Explain how the Uster evenness tester measures yarn irregularities. (CO3, K2)

14. (a) Explain the principle of the Shirley stiffness tester in fabric stiffness measurement. (CO4, K2)

Or

(b) Describe the procedure of testing crease recovery of a fabric. (CO4, K2)

15. (a) Discuss the importance of dimensional stability testing in garments. (CO5, K2)

Or

(b) Explain the significance of MMT test. (CO5, K2)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Compare different methods to measure moisture content in textile and their applications. (CO1, K4)

Or

(b) Analyze the different methods used in sampling yarn and fabrics. (CO1, K4)

17. (a) Compare the Baer sorter and Micronaire methods for fiber testing and evaluate their advantages and limitations. (CO2, K4)

Or

(b) Analyze how fiber maturity testing is carried out and how does maturity affect the quality of the final textile product? (CO2, K4)

18. (a) Compare CRT, CRL and CRE methods for yarn strength testing and analyze their differences. (CO3, K4)

Or

(b) Analyze the impact of twist on yarn strength and evenness based on testing results. (CO3, K4)

19. (a) Analyze the impact of fabric abrasion resistance on garment durability. (CO4, K4)

Or

(b) Compare the methods used for testing fabric strength (tensile, tearing, bursting) and analyze their applications. (CO4, K4)

20. (a) Analyze the significance of seam strength testing in garment quality control. (CO5, K4)

Or

(b) Compare different methods of accessory testing (e.g., zippers and buttons) and analyze their role in product performance. (CO5, K4)

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R1858

Sub. Code
2MF3E2

M.Voc. DEGREE EXAMINATION, NOVEMBER – 2024

Third Semester

Fashion Technology

Elective – LEAN MANUFACTURE IN APPAREL INDUSTRY

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective questions by choosing the correct option.

1. What is considered the primary objective of lean manufacturing? (CO1, K1)

   (a) Increased workforce

   (b) Reduction of wastage

   (c) Improved product variety

   (d) Higher profit margins

2. Which of the following is NOT one of the eight types of waste in lean manufacturing? (CO1, K1)

   (a) Overproduction

   (b) Excess inventory

   (c) Innovation

   (d) Waiting time

3. In the SIPOC model, what does the "P' stand for? (CO2, K1)

(a) Product (b) Process

(c) Productivity (d) People

4. Which lean tool is used to identify and eliminate non-value-added activities? (CO2, K1)

(a) Value Stream Mapping (VSM)

(b) Kaizen

(c) Kanban

(d) Just-In-Time (JIT)

5. What does DMAIC in Six Sigma stand for? (CO3, K1)

(a) Define, Measure, Analyze, Improve, Control

(b) Define, Manage, Analyze, Improve, Conclude

(c) Develop, Measure, Adjust, Implement, Control

(d) Define, Monitor, Analyze, Implement, Control

6. Which model helps in achieving world-class zero-defect production? (CO3, K1)

(a) DMAIC Model (b) EOQ Model

(c) Takt Time Model (d) Kaizen Model

7. What is Takt Time? (CO4, K1)

(a) The time taken to change over a machine

(b) The time required to produce one product

(c) The time available to produce exactly what is required

(d) The time spent on rework and repair

8. What is the primary goal of Kaizen in lean manufacturing? (CO4, K1)

(a) Reducing product variety

(b) Continuous improvement

(c) Increasing production rate

(d) Outsourcing operations

9. Which of the following is a lean tool aimed at reducing setup time? (CO5, K1)

(a) Poka-Yoke

(b) Andon

(c) SMED (Single-Minute Exchange of Die)

(d) TPM (Total Productive Maintenance)

10. The concept of "Supermarket" in lean refers to: (CO5, K1)

(a) The location where excess inventory is stored

(b) A system for managing inventory through demand signals

(c) The reworking of defective goods

(d) A storage facility for finished goods

Part B ($5 \times 5 = 25$)

Answer **all** the questions not more than 500 words each.

11. (a) Explain the concept of the eight types of waste in lean manufacturing and how they affect production efficiency. (CO1, K2)

Or

(b) How can the 5S principles (Seiri, Seiton, Seiso, Seiketsu, Shitsuke) be applied to improve housekeeping practices in the garment industry? (CO1, K3)

12. (a) Illustrate how the SIPOC model is used to define the critical aspects of a manufacturing process. (CO2, K3)

Or

(b) Define the process and objectives of CTQ. (CO2, K2)

13. (a) How is the DMAIC methodology used in the Zero Defect Program and how does it lead to improvements in manufacturing processes? (CO3, K3)

Or

(b) Analyze the effectiveness of lean inventory control in improving cost savings and inventory turnover in a manufacturing firm. (CO3, K4)

14. (a) Explain about application of KAIZEN in reducing rejections. (CO4, K2)

Or

(b) Discuss about application of KANBAN cards for production planning and control for trace ability and identification. (CO4, K3)

15. (a) Evaluate the importance of quick change over techniques like SMED in enhancing production flexibility in the garment industry. (CO5, K4)

Or

(b) Assess the impact of Total Productive Maintenance (TPM) in reducing equipment downtime and improving productivity. (CO5, K4)

Part C (5 × 8 = 40)

Answer **all** the questions not more than 1000 words each.

16. (a) Critically evaluate the impact of the eight wastes on an apparel manufacturing firm's profitability. (CO1, K5)

Or

(b) Design a waste reduction strategy for a garment production unit by applying lean principles. (CO1, K6)

17. (a) Evaluate the effectiveness of the SIPOC model in ensuring product quality and customer satisfaction in the garment industry. (CO2, K5)

Or

(b) Develop a Value Stream Mapping plan for a textile factory to eliminate non-value-added activities. (CO2, K6)

18. (a) Critically assess the role of Six Sigma's DMAIC approach in achieving lean production goals in an apparel firm. (CO3, K5)

Or

(b) Propose an inventory management system for a garment company using lean and Six Sigma principles to minimize defects and improve turnaround times. (CO3, K6)

19. (a) Evaluate how Takt Time contributes to synchronizing production rates with customer demand in lean manufacturing. (CO4, K5)

Or

(b) Design an economic production order model for a company, integrating lean inventory techniques to minimize costs and reduce lead times. (CO4, K6)

20. (a) Evaluate the success of implementing a cellular production system in a lean garment manufacturing firm. (CO5, K5)

Or

(b) Develop a lean transformation strategy for a garment company focusing on the integration of SMED, TPM and Andon to improve productivity. (CO5, K6)

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