

Register Number.....

B.TECH. DEGREE EXAMINATIONS: APRIL/MAY 2012

Sixth Semester

TEXTILE TECHNOLOGY

TTX116: Nonwovens and Speciality Textiles

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. The advantages of application of man made fibres in the production of nonwoven fabrics are
 - A) Free choice of thermal properties and elasticity
 - B) Elasticity and resistance to aggressive environment
 - C) Free choice of thermal properties and resistance to aggressive environment
 - D) Elasticity, free choice of thermal properties and resistance to aggressive environment
2. Wet laying system of web preparation is _____
 - A) Mechanical system
 - B) Aerodynamic web laying
 - C) Electrostatic web laying
 - D) Drift deposition system
3. Binding of fibre strands is carried out in _____
 - i. Needling techniques
 - ii. Stitch bonding without binding threads
 - iii. Adhesive bonding

A) i & ii B) ii & iii C) i & iii D) i, ii & iii
4. Identify the method of production of fibrous layer from the typical features observed by a microscope. Features: "Random fibre arrangement; often typical fibre cluster and flat type layer arrangement"
 - A) Mechanical method
 - B) pneumatic method
 - C) Drift deposition system
 - D) Electrostatic system
5. Which one of the following determines needled fabric properties?
 - A) Fibre properties and bonding conditions
 - B) Fibre properties and binding conditions
 - C) Needled fabric structure and bonding conditions
 - D) Fibre properties, bonding conditions and needled fabric structure

6. The size of braided narrow fabrics is governed by
- The diameter of the yarns
 - The number of yarn ends per carrier
 - The number of carriers
- A) i & ii B) ii & iii C) i & iii D) i, ii & iii
7. In narrow needle loom, the selvedge formed is _____
- A) Woven B) Knitted C) Leno D) Tucked
8. A strong narrow, closely woven fabrics used especially for seat belts and harnesses are _____
- A) Lanyards B) Laces C) Webbing D) Ribbons
9. A narrow tubular or flat fabrics produced by intertwining to a definite pattern is _____
- A) Braid B) Flack C) Net D) Trim
10. To achieve uniform height of pile in finished carpet _____ process is used.
- A) Calendaring B) Brushing C) Shearing D) Singeing

PART B (10 x2=20 Marks)

- Differentiate between paper and textiles.
- State the role of fibres in nonwovens.
- Which type of fibres are preferred for thermal bonding? Why?
- What are the features of perpendicular laid web formation?
- What are laminated fabrics?
- State the need for coating process on textiles.
- What are narrow fabrics?
- State the concept adopted in shoe making process.
- What is meant by trimmings?
- Classify the labels and also give their importance.

PART C (5x14 = 70 Marks)

21. a) Explain about the perpendicular laid web formation techniques with neat sketch.

(OR)

- b) What are parallel and cross laid web preparation techniques? Explain.

22. a) Discuss the working principle of stitch bonding machine without binding threads.

(OR)

b) Explain the different types of thermal bonding nonwoven techniques with process variables.

23. a) Differentiate between coated and uncoated fabric. Discuss any three methods of production of coated fabrics.

(OR)

b) Briefly discuss the properties of laminated fabrics and state their end uses.

24. a) Clearly bring out the classification of narrow fabrics and discuss their applications.

(OR)

b) Explain with neat sketch, the formation of knitted edge selvages in narrow needle loom.

25. a) Briefly discuss the manufacturing process of pile surfaced carpet fabrics

(OR)

b) Write short note on following

(i) Tufted fabrics (7)

(ii) Flat braided fabrics (7)
