Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – June 2021

VI Semester

Class : III UG **Time : 3 Hours**
Major : Textiles and Apparel Designing **Max. Marks : 100**

18BTDC33 Non-Woven

Part A **10 x 1= 10**

Choose the Correct Answer

1. _____ plays an important role when manufacturing nonwovens. CO1 K1
   a. Bonding b. Fusing
   c. Heating d. Guming

2. Nonwoven fabrics are porous webs which are produced directly from CO1 K1
   a. Fabric b. Yarn
   c. Fibers d. Filament

3. The main web formation methods are CO2 K2
   a. Roving b. Spinning
   c. Carding d. Drawing

4. _____ process, staple fibers of up to 12 mm fiber length. CO2 K1
   a. Dry laid b. Wet laid
   c. Cross laid d. Parallel laid

5. Needle punching is a nonwoven process by which the fibres are mechanically entangled to produce a nonwoven fabric by repeated penetration of CO3 K3
   a. Needles b. Shutter
   c. Serrated edges d. Conveyor belt

6. The binding agents used in the through _____ process include crystalline binder fibers and powders. CO3 K1
   a. Water jet b. Air bonding
   c. Thermal bonding d. Fusing

7. _____nonwovens are made by spinning continuous filament fibers onto a moving belt. CO4 K2
   a. Spun lace b. Melt blow
   c. Spunbond d. Needle punching

8. The_____ is entangled and the fibres interlinked through multiple rows of jets of water at high pressure. CO4 K1
   a. Fiber b. Fabric
   c. Filament d. Web

9. _____ burns very rapidly with a relatively low amount of smoke. CO5 K1
   a. Polyester b. Nylon
   c. Cotton d. Polypropylene

10. _____ was not directly proportional to the pressure gradient. CO5K2
   a. Elongation b. air permeability
   c. Flammability d. Strength

Part B **5 x 6= 30**

Answer the following

Answers should not exceed 400 words or two pages

11.a. Define Non-Woven and its types.	CO1 K1
(or)	
11.b. Write a note on Chemical bonding.	CO1 K2
12.a. Define web formation.	CO2 K1
(or)	
12.b. Write a short note on random laid.	CO2 K2
13.a. What are Thermal bonding and how it is made?	CO3 K1
(or)	
13.b. Give a short note on calendar bonding.	CO3K1
14.a. Write a note on spun lace manufacturing process.	CO4 K2
(or)	
14.b. Give a note on foam spray.	CO4 K1
15.a. Write a short note on thickness on non-woven fabric.	CO5 K2
(or)	
15.b. Give a note on evaluation of absorbency on non-woven material.	CO5 K1

Part C **5 x 12= 60**

Answer the following

Answers should not exceed 800 words or four pages

16.a. Explain in detail about thermal bonding.	CO1 K1
(or)	
16.b. Describe in brief about advantage and disadvantage of non-woven.	CO1 K4
17.a. Define in brief about wet laid.	CO2 K1
(or)	
17.b. Write a brief note on web formation.	CO2 K2
18.a. Discuss in detail about needle punching process.	CO3 K2
(or)	
18.b. Elaborate in detail about hydro entanglement process.	CO3 K2
19.a. Write a brief note on spun bond manufacturing process.	CO4 K2
(or)	
19.b. Give a detailed note on print bond technology.	CO4 K1
20.a. Write a detailed note on acoustic on non-woven fabric.	CO5 K2
(or)	
20.b. Give a brief note on evaluation of air permeability on non-woven material.	CO5 K1

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