

16127(D) - 0 DEC 2016

B. Tech 5th Semester Examination
Nonwoven Technology (NS)

TE-314

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all. Select one question from each section A, B, C & D. Section E is compulsory.

SECTION - A

1. (i) Describe the characteristics of hydroentangled fabric characteristics. Describe the end use application of hydroentangled fabric. (10)
- (ii) Explain meltblow process in detail with clear diagram. (10)
2. (i) Explain the wet-laid process with clear diagram. (10)
- (ii) Explain different types of needlelooms with diagram. (10)

SECTION - B

3. (i) Explain the factors determining the binder characteristics. (10)
- (ii) Explain different types of binders along with chemical structure used for chemical bonding process. (10)
4. (i) Explain the working of different machines used in air-laid process. (10)
- (ii) Explain different stages in spunbonding process with clear diagram. (10)

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SECTION - C

5. (i) Explain the working of a roller and clearer card. (10)
- (ii) Explain the flow through bonding process with clear diagram. (10)
6. (i) What are the web characteristics and properties of melt-blown web? (10)
- (ii) What are the web characteristics and properties of spunbonded web? (10)

SECTION - D

7. Explain various standards and testing methods available to check quality of a finished nonwoven fabric (20)
8. Discuss the application of nonwoven in medical, automobile and agriculture sector (20)

SECTION - E

9. (i) Explain the functions of a cross-lapper.
- (ii) Explain the functions of Lap drafter.
- (iii) Define depth of penetration.
- (iv) Define punching density.
- (v) What are the essential characteristics of the binder used in thermal bonding process?
- (vi) What are process variables of area bonding?
- (vii) What are the methods of heating calender rolls?
- (viii) What are the advantages of using cellulosic pulp in wet laid process?
- (ix) How will you manufacture Polychloroprene?
- (x) What are the characteristic features of Polyurethane type binder? (2×10=20)