15175

B. Tech 5th Semester Examination

Textile Testing-I (NS)

TE-313

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 : Candidates are required to attempt five questions in all selecting one question from each section A, B, C & D of the question paper and all the subparts of the questions in section E. Use of non-programmable calculators is allowed.

SECTION - A

1. What is the aim of testing? What are different sampling techniques? Discuss in brief.   (4+16=20)

2. Differentiate between absolute humidity and relative humidity. What do you understand by standards atmospheric condition for textile testing? What are the factors effecting regain of a textile material? Discuss the effect of moisture on fiber properties.   (4+2+8+6=20)

SECTION - B

3. What do you understand by fineness? How can you measure fineness of cotton fiber? What do you understand by maturity? How can you measure maturity of cotton of fiber?
                                        (4+8+3+5=20)

4. Explain the method of measuring trash content with suitable diagrams. What is fiber crimp? Discuss the method of measuring fiber crimp.   (10+2+8=20)

[P.T.O.]

SECTION - C

5. Define Tex yarn numbering system. Convert 81 denier into Tex system. What are the factor affecting tensile properties of yarn? Discuss any suitable method of measuring tensile properties of yarn.   (2+2+8+8=20)

6. What do you understand by elastic recovery? How can you measure elastic recovery of a yarn?

    What is twist? Explain any suitable method of measuring twist of plied yarn with suitable diagram.   (4+4+2+10=20)

SECTION - D

7. Define thick place, thin place and neps. Discuss the principles and testing method of evenness testing instrument. Explain the method of evaluation and interpretation of evenness results.
                                        (6+10+4=20)

8. What do you understand by index of irregularity? Define yarn hairiness and discuss principle and working mechanism of yarn hairiness tester.   (6+14=20)

SECTION - E

9. (a) Define moisture regain.

    (b) Define standard atmospheric condition for textile testing.

    (c) What do you understand by contaminations?

    (d) Why Tensile testing result for 'zero' mm gauge length and 'three' mm gauge length are differed?

    (e) What do you understand by U%?

    (f) What do you understand by maturity of cotton fiber?

    (g) Define denier.

    (h) What is the importance of fiber crimp?

    (i) What is the relation between moisture regain and heat of sorption?

    (j) What do you understand by textured yarn?   (2×10=20)