Code No: 153CQ **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year I Semester Examinations, April/May - 2023
TEXTILE TESTING – I
(Textile Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

1.a) Define: Population, Sample, Random Sample. [2]
b) Calculate the sample size at 95 % Confidence interval if CV is 3.67% and error is 2 %. [3]
c) Mark the Sigmoid relation between RH and Regain. [2]
d) How the Regain is useful in ascertaining the correct value of count? [3]
e) Classify the instruments based on Weight Distribution in Fibre length measurement. [2]
f) A student records micronaire values of cotton as: 4.85, 2.75, 3.87. How do you draw the inference? [3]
g) How "CRL" and "CRE" tensile instruments differ? [2]
h) What is "CCSP"? How it is calculated? [3]
i) Examine the relation between Yarn count and Yarn twist. [2]
j) A student records twist as: 13 tpi for double yarn, 34 tpi for single yarn and 70 tpi for 18 D Silk yarn. How do you draw the conclusions? [3]

PART - B

(50 Marks)

2. You are given a role of fabric length of 200 meters. Explain how do you proceed to select the samples for Fabric testing. Give a detailed answer. [10]

OR

3. Explain with merits and demerits the sampling methods of Cotton. [10]

4. Starting from bale of cotton, explain the laboratory procedure to measure the Moisture Regain with necessary tabular recording. [10]

OR

5. Give an account of working of: Hair hygrometer, Wet and Dry bulb hygrometer. [10]

6. How do you identify the "Matured", "Half matured" and "Dead" fibres under microscope? Explain the Laboratory method of measuring the Fibre maturity. [10]

OR

7. Compare the performance of Fineness measuring instruments on quality grounds. [10]

8. You are given 200 grams of Cotton fibre. Explain how do you proceed to measure the Lint content, Trash content and invisible loss using Shirley Analyser. [10]

OR

9. You are given 200 grams of two types of cotton fibres A and B. Explain how do you measure the fibre strength using Stelometer. Give the recording of observations. [10]

10. Why the industry does not prefer the Beesley's balance of yarn count? Given 100 ring cops, describe the experimental set up to measure the yarn count by "WRAP REEL" method. [10]

OR

11. Explain the laboratory method of measuring twist of a double yarn in laboratory. [10]

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