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Printed Pages : 3

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BT-4 / M-18

TEXTILE TESTING-I

Paper–TT-208 N

Time allowed : 3 hours] *[Maximum marks : 75*

Note :- *Attempt **five** questions in all, selecting **one** from each section. **Question No. 1 of Section A is compulsory.***

Section–A

1. Answer in brief:

(i) Why is it necessary to go for sampling?

(ii) Differentiate Absolute themidity and Relative Humidity.

(iii) On what principle, Shirley moisture metre works?

(iv) What is the difference between standard atmosphere and standard testing atmosphere?

(v) Define Nep Count.

(vi) What is meant by Pressley Index?

(vii) Define Internationally accepted length parameters of cotton.

(viii) How is Maturity Coefficient calculated?

(ix) What are objectionable faults in a spun yarn?

(x) Which method is preferred for measuring twist in rotor spun yarns and why?

(xi) Specify the relation between N_e (English) and N_w (worsted) systems of yarn numbering.

(xii) What is the significance of variance length curves?

(xiii) Define Work factor and Elastic Recovery.

(xiv) What is the difference between CRE and CRT?

(xv) List a few instruments for measuring yarn hairiness based on capacitive and optical principles. 1×15=15

Section–B

2. (a) What are the basic differences between squaring and cut-squaring techniques?

(b) How will you select a sample from a Ring frame for testing yarn linear density?

(c) What is the importance of testing? 5×3=15

3. (a) Define Moisture Regain and Moisture Content. Derive the relationship between the two.

(b) Discuss the principle and working operation of Shirley Moisture Meter. 7+8

Section–C

4. (a) What is the need of cotton Grading? Describe various grading systems.

(b) Classify the methods of measuring fibre fineness and discuss one instrument based on the use of air flow. 7+8

5. (a) Why is it necessary to measure trash content in cotton? Discuss the principle and working operation of Shirley trash Analyzer.

(b) List the salient features of HVI and AFIS. 8+7

Section–D

6. (a) Classify periodic variations. How can you measure these variations?

(b) Discuss the methods of measuring yarn twist. 7+8

7. (a) Discuss Quadrant Balance in brief.

(b) With the help of a neat and clean diagram, categories different types of faults measured by classimat and highlight objectionable faults. 8+7

Section–E

8. (a) Write a note on Yarn Hairiness and its measurement.

(b) Discuss the principle and working of any one Single Yarn Strength Tester. 7+8

9. (a) Define Tenacity, Extension, Toughness Index, Yield Point, and Work of Rupture.

(b) Discuss the factors affecting tensile properties.

(c) Why do we measure CSP? 5+7+3