Register Number……

M.TECH. DEGREE EXAMINATIONS: MAY / JUNE 2010

Second Semester

TEXTILE TECHNOLOGY

TTX506: Yarn Quality Analysis

Time: Three Hours **Maximum Marks: 100**

Answer All the Questions:-

PART A (10 x 2 = 20 Marks)

1. State the effect of doubling on CV & U%, and relationship between CV & U%
2. What is the difference between Neps & Thick place in analysis?
3. If the measuring field length is increased from 10mm to 30mm (leathered) in an evenness tester, what is its effect on test result?
4. What are the advantages of variance – length curve over spectrogram?
5. What do you mean by medium – term periodic mass variation?
6. Write a short note on the effect of oval shaft's on the spectrogram.
7. Why do we give pre-Tensional force for sample while measuring elongation?
8. Differentiate initial modulus from young's modulus.
9. What is the effect of yarn elongation on weaving?
10. State the effect of yarn quality knitted fabric comfort properties.

PART B (5 x 16 = 80 Marks)

11. a) Discuss in detail the analysis of mass variation diagram with an example and discuss the significance of the same.

(OR)

b) Elaborate the classification and analysis of yarn faults created by mass variation.

12. a) How will you determine the variance – length curve by

(i) cutting & weighing method (8)

(ii) Evenness tester method (8)

(OR)

b) Enumerate influence on variance length curve by

(i) Separate process stages (8)

(ii) Periodic mass variations (8)

13. a) (i) Describe the influence of vibrations in a spinning mill on the spun product. (8)

(ii) Briefly explain about periodic mass variations due the coiling of silver. (8)

(OR)

b) (i) Tabulate the wave length range of machine faults in a cotton spinning mill. (8)

(ii) Tabulate the wave length range of periodical faults with rotor spinning process. (8)

14. a) (i) Establish the relationship between yarn breaking strength and twist. (8)

(ii) Enumerate the relationship between Tensional force and weight per unit length variation. (8)

(OR)

b) Explain the influences of following on tensile force & Elongation measurements.

(i) Test length (4)

(ii) Testing Speed (4)

(iii) Humidity (4)

(iv) Temperature (4)

15. a) Explain about effect of Yarn tension history on the performance of yarn during Winding, Weaving, Knitting.

(OR)

b) Elaborate the effect of yarn evenness and strength on fabric wear, appearance and comfort properties.

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