Major Test: TTL361 Textile Testing

Date: 01.12.2006 Weightage: 40%

Answer all questions

Answer the questions exactly in the sequence as they have been framed

5+5= 10

1. a. Describe in details, with appropriate diagram, a tensile testing instrument that does not follow CRT, CRL or CRE principles.

b. The tenacity of a 29.5 Ne cotton yarn at 5 in gauge length is 15 g/tex. At what tension, in the constant-tension winding test, the breakage rate will be 20 breaks per 1000 yds? (Assume the standard deviation of the single yarn strength is always 20 and at 200 g tension the breakage rate is 0.5 breaks per 100 yd).

4+3+3 = 10

2.a. 20,000 km of 150 denier yarn at 8.5 % moisture content is shipped. What would be the correct invoice weight if the official moisture regain is 6.0%.

b. Explain the advantages of Cusic Drape Tester over normal Drapemeter. Explain, with suitable curve, how the bending length, shear stiffness and drape coefficient are related.

c. Describe various factors affeeting the abrasion resistance of fabrics.

5+5 = 10

3. a. Describe, with neat sketch, the working principle of KES-FB4 instrument. With suitable curve explain the importance of various parameters measured in KES-FB2.

b. Draw neatly a typical FAST chart (fingerprint) of a fabric with following problems during garment manufacturing,

- sizing
- check matching
- cutting
- laying-up

and describe in details the applications of FAST ehart particularly in the garment industry.

2.5×4 = 10

4. Describe briefly, with schematic sketch, the working principles of the following instruments,

a) Permetest, b) UMIST wettability tester, c) Moisture Vapour Transmission Tester with MVT Cells, d) Two plate Togmeter.