

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Question Paper Code : P 1572**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Fourth Semester

Textile Technology

TT 1255 --- STRUCTURE AND PROPERTIES OF FIBRES

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A --- (10 × 2 = 20 marks)

1. Diagrammatically indicate the structural difference between the Jute and Cotton fibres.
2. The cotton fibres of all varieties having twisted ribbon form of longitudinal view - Justify.
3. What will be the moisture regain and moisture content when Viscose fibre of dry mass 10 gram, absorbs 2g of water?
4. Write the difference between differential and integral heat of sorption.
5. Explain elastic and plastic extension.
6. Define the term 'Mechanical conditioning of fibres' with an example.
7. Most of the Man Made fibres show excellent lustre as compared with natural fibres - Reason out.
8. In general, the frictional property of wool fibre is completely different as compared with other textile fibres - Reason out.
9. Define Specific heat.
10. Write down the factors influencing electrical resistance of fibres.

PART B --- (5 x 16 = 80 marks)

11. (a) Explain the structural features of cotton fibres.

Or

- (b) Explain the structural investigation of fibres using Infra-red radiation.

12. (a) Draw the moisture absorption curve of different fibres and explain the term absorption hysteresis.

Or

- (b) Explain the theory of conditioning process and its influencing factors.

13. (a) Discuss in detail the creep phenomena.

Or

- (b) How does stress – strain curve differs from load – elongation curve and explain the theory of stress – strain curve.

14. (a) Explain any two technique of measuring the refractive index of fibres.

Or

- (b) Explain any two methods of measurement of fibre friction.

15. (a) Explain the influence of various factors influencing di-electricity of fibres.

Or

- (b) Write the following short notes

(i) Static electricity elimination techniques. (8)

(ii) Fibre structural changes on heating. (8)