KUMARAGURU
college of technology
character is life

B.TECH DEGREE EXAMINATIONS: DEC 2022

(Regulation 2017)

Third Semester

TEXTILE TECHNOLOGY

U18TXT3001**:** Physical Properties of Textile Fibres

COURSE OUTCOMES

CO1: Outline the fundamentals of fibre structures and various properties of polymer system.

CO2: Interpret the relationship between various parameters and the moisture properties of fibres.

CO3: Explain about the concepts of mechanical properties of fibres.

CO4: Describe the optical and frictional parameters related with fibre properties.

CO5: Discuss about the fundamentals and measurement of electrical and thermal properties of fibre.

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

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Enlist the characteristics of crystalline region.	CO1	[K$_1$]
2.	What is the importance of degree of orientation?	CO1	[K$_2$]
3.	Brief on the Relative Humidity.	CO2	[K$_2$]
4.	Recall the equilibrium absorption.	CO2	[K$_1$]
5.	Infer from initial modulus and yield point	CO3	[K$_2$]
6.	What is flexural rigidity?	CO3	[K$_1$]
7.	What do you mean by refractive index?	CO4	[K$_2$]
8.	List the factors influencing the lustre.	CO4	[K$_1$]
9.	Tell the disadvantages of static electricity.	CO5	[K$_2$]
10.	Compare glass transition temperature and melting point.	CO5	[K$_3$]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11. Explain about the various molecular forces exists in a polymer system   CO1   [K$_2$]

12. Discuss the moisture regain curves of various natural and synthetic fibers through   CO2   [K$_3$]
     suitable graphs.

13. Elaborate on the moisture conditioning process with respect to temperature,   CO2   [K$_2$]
     regain and vapor pressure using graphs.

14. Illustrate the stress-strain curves of various natural and synthetic fibres with   CO3   [K$_3$]
     justification of their behavior.

15. Outline on the luster and reflection properties of fibers.   CO4   [K$_2$]

16. Demonstrate on problems of static electricity and show the various methods to   CO5   [K$_3$]
     control the same using diagrams.

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