Register Number:……..

KUMARAGURU college of technology
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B.E/B.TECH DEGREE EXAMINATIONS: NOV /DEC 2024

(Regulation 2018)

Sixth Semester

TEXTILE TECHNOLOGY

U18TXE0005:Sustainability In Textile Manufacturing And Material

COURSE OUTCOMES

CO1: Understand the green process methods in textiles.
CO2: Discuss about various concepts of eco-friendly chemical processing.
CO3: Explain about the quality standards and assessment of eco-textiles.
CO4: Summarize about the various organic and sustainable textiles.
CO5: Explain about the role of recycling and upcycling.

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

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

1.	List any two principles of "green chemistry".	CO1	K_1
2.	Why is proper handling of raw materials crucial for sustainable textiles and clothing?	CO1	K_1
3.	List two methods of increasing energy efficiency in textile wet processing.	CO2	K_1
4.	What are natural dyes? Give two examples.	CO2	K_1
5.	How do Oekotex standards contribute to ensuring the quality of eco-textiles?	CO3	K_1
6.	Name four heavy metals and their harmful effects on the human body.	CO3	K_1
7.	How does recycling of polyester contribute to sustainability?	CO4	K_2
8.	Define a) Carbon footprint and b) Net zero	CO4	K_1
9.	How is Life Cycl Assessment important in assessing sustainability?	CO5	K_1
10.	Name four corporate social responsibility initiatives that can be undertaken by an industry.	CO5	K_1

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

11.	a)	Compare and contrast the environmental impact of chemical processes versus green processes in textile manufacturing, citing suitable examples.	10	CO1	K_4
	b)	Describe any one methods and technologies available for the efficient handling and recycling of textile waste with an examples.	6	CO1	K_3

12.	a)	Compare the environmental impact of traditional wet processing methods with modern eco-friendly approaches in textile manufacturing.	10	CO2	K_3
	b)	Describe the use and advantage of enzymes in wet processing with examples.	6	CO2	K_3
13.		Explain the significance of ISO 14000 in the textile industry. How does the implementation of Environmental Management Systems (EMS) based on ISO 14000 guidelines contribute to sustainability in textile manufacturing processes?	16	CO3	K_4
14.		Describe the production processes of 1) organic cotton and 2) organic wool, highlighting their environmental benefits and drawbacks	16	CO4	K_3
15.		Discuss the ethical and environmental issues surrounding manufacturing rights in the textile and fashion industry.	16	CO5	K_3
16.		Describe two common testing methods used to assess the eco-friendliness of textile dyes and chemicals.	16	CO3	K_3

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