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22CDP208N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(Second Semester)

Branch – **COSTUME DESIGN & FASHION**

FUNCTIONAL FINISHING ON TEXTILES

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which material is commonly used for thermal regulation in textiles? a) Polyester b) Acrylic c) Phase change materials d) Silk	K1	CO1
	2	Moisture management finishes are designed to a) Enhance fabric softness b) Wick moisture away from the skin c) Retain moisture in the surface of the skin d) Improve colorfastness	K2	CO1
2	3	The important characteristic of a hydrophobic finish is to a) Improves moisture absorption b) Reduces moisture absorption c) Enhances fabric softness d) Prevents microbial growth	K1	CO2
	4	Infer the difference between waterproofing and water repellency in textiles. a) Waterproofing prevents any water penetration, while water repellency reduces wetting b) Water repellency prevents water penetration, while waterproofing allows water to pass through c) Both have same characteristics d) Waterproofing enhances breathability, while water repellency reduces it	K2	CO2
3	5	Which parameter is essential for ensuring the effectiveness of antimicrobial finishes? a) Type of weave b) Fabric softness c) Temperature of application d) Fabric density	K1	CO3
	6	Recent developments in textile finishing technology focus on a) Reducing environmental impact and enhancing sustainability b) Using aesthetic finishes only c) Reducing textile functionality d) Improved strength and durability of fabric	K2	CO3
4	7	Enzymes are used in the functionalization of synthetic fibers to a) Improve dye absorption b) Increase tensile strength c) Remove pilling d) Enhance water resistance	K1	CO4
	8	Enzymes used in textile processing are classified as_____ a) Organic dyes b) Catalysts c) Inorganic additives d) Synthetic fibers	K2	CO4
5	9	The TM195 test method is used to assess the a) Fabric elasticity b) Liquid moisture management c) Colorfastness d) Absorbency of textiles and Tear strength	K1	CO5
	10	The air flow method in AATCC TM200 is used to determine a) The fabric's resistance to wear b) How quickly textiles dry after absorbing moisture c) The ease of dyeing the fabric d) The level of fabric pilling	K2	CO5

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SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Identify the sustainability of using enzymatic bio finishes compared to traditional chemical finishes in textile processing	K3	CO1
		(OR)		
	11.b.	Construct the process of applying a shrink-resist finish to wool fabrics.		
2	12.a.	Analyze the effectiveness of radiation protection finishes in reducing UV exposure for outdoor workers.	K4	CO2
		(OR)		
	12.b.	Differentiate between insect repellent finishes and antimicrobial finishes in terms of their chemical composition and their effectiveness in protecting textiles.		
3	13.a.	Apply the principles of microencapsulation technology to propose a new application for fragrance finishes in sportswear.	K3	CO3
		(OR)		
	13.b.	Implement a strategy to regulate the application of nanotechnology in textile finishing, ensuring safety and effectiveness.		
4	14.a.	Compare the effectiveness of cellulase and protease enzymes in the bio-polishing process.	K4	CO4
		(OR)		
	14.b.	Analyze how the application of enzymes in the process of surface modification and functionalization of polyester fibre.		
5	15.a.	Evaluate the effectiveness of bacterial alpha-amylase enzymes in desizing of natural fibers.	K5	CO5
		(OR)		
	15.b.	Determine the effectiveness of AATCC 70 test method in assessing the water repellency of fabrics compared to other standard methods.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Compare thermal regulation finishes with moisture management finishes in terms of their impact on wearer comfort.	K4	CO1
2	17	Categorize the reliance on ASTM standards for protective garments in hazardous work environments.	K4	CO2
3	18	Analyze the use of UV radiation finishes and antimicrobial finishes in the textile industry. Discuss how these finishes contribute to wearer protection and the challenges associated with their application and durability?	K4	CO3
4	19	Critique the application of enzymes in the finishing of technical textiles, focusing on their effectiveness in enhancing moisture management.	K5	CO4
5	20	Critically assess the utility of RA 49 test methods for insect resistance in the production of textiles used in outdoor and military applications.	K5	CO5

Z-Z-Z END