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22CDU101N

PSG COLLEGE OF ARTS & SCIENCE

(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025

(First Semester)

Branch – **COSTUME DESIGN AND FASHION**

TEXTILE SCIENCE

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	What is the primary step in the processing of wool after shearing? a) Carding b) Dyeing c) Spinning d) Scouring	K1	CO1
	2	Cotton fibres are predominantly characterized by their a) High tensile strength b) High absorbency c) Low elasticity d) High thermal insulation	K2	CO1
2	3	Which type of polymerization involves the reaction of monomers with a double bond? a) Addition Polymerization b) Condensation Polymerization c) Copolymerization d) Ring-Opening Polymerization	K1	CO2
	4	The primary polymer used in nylon fibres is a) Polyethylene b) Polyamide c) Polypropylene d) Acrylonitrile	K2	CO2
3	5	The primary objective of ginning in the spinning preparatory process is to a) Blend fibres for uniformity b) Remove seeds and impurities from cotton fibres c) Card and straighten fibres d) Achieve uniform fibre characteristics	K1	CO3
	6	The primary function of the carding process is to_____. a) Remove short fibres and impurities b) Blend and mix fibres c) Align and separate fibres into a uniform web d) Spin fibres into yarn	K2	CO3
4	7	What is the purpose of the drafting process in yarn production? a) To remove impurities from fibres b) To prepare roving for spinning c) To blend the fibre d) To reduce the thickness of the fibre strand and increase alignment	K1	CO4
	8	In the doubling process, what happens to the yarn strands? a) They are spun into thicker yarn b) They are combined to form a thicker and stronger yarn c) They are cleaned to remove impurities d) They are carded and blended	K2	CO4
5	9	What is the main purpose of texturization in yarn manufacturing? a) To improve colorfastness c) To increase the yarn's volume and elasticity c) To reduce yarn thickness d) To decrease production time	K1	CO5
	10	Which of the following best describes the TFO process? a) A process that reduces yarn shrinkage b) A process that combines two yarns using a false twist c) A method that applies a permanent twist to yarn d) A technique used to remove twist from yarn	K2	C05

Cont...

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.	Describe the retting process for jute. What is its purpose in fibre processing?	K2	CO1
		(OR)		
	11.b.	Explain how bamboo fibres are processed to enhance their antimicrobial properties.		
2	12.a.	Apply the concept of bicomponent fibres to suggest a suitable application for these fibres in textiles.	K3	CO2
		(OR)		
	12.b.	Apply your understanding of viscose fibre properties to recommend its use in a specific type of garment. Justify your choice.		
3	13.a.	Apply the concept of mixing and blending operations to evaluate its efficiency of uniform quality of yarn.	K3	CO3
		(OR)		
	13.b.	Identify the objectives and working principles of a ginning machine.		
4	14.a.	Evaluate how inconsistencies in the passage of material through the simplex machine can affect the overall spinning process.	K4	CO4
		(OR)		
	14.b.	Analyze the effect of different yarn tension levels during winding on the quality of yarn packages.		
5	15.a.	Distinguish the advantages and disadvantages of using heat setting versus chemical texturization in yarn production.	K4	CO5
		(OR)		
	15.b.	Compare the impact of fibre contamination versus improper twist levels on yarn faults and suggest solutions.		

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 and contrast the processing methods of banana fibre with areca fibre.	K4	CO1
2	17	Analyze the impact of different spinning methods on the texture and performance of synthetic fibres.	K4	CO2
3	18	Evaluate how the integration of drafting and combing processes influences the final yarn quality.	K4	CO3
4	19	Examine the steps involved in roving and its significance in ensuring the fibres are suitable for spinning.	K4	CO4
5	20	Analyze the manufacturing process of the sewing threads.	K4	CO5

Z-Z-Z END