

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2024
(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	Areca fibers are characterized by their____ a) High moisture absorption b) High strength and durability c) Low flexibility d) Poor dye uptake	K1	CO1
	2	The primary physical property of jute fibers is a) High elasticity b) Low absorbency c) High tensile strength d) High luster	K2	CO1
2	3	What is the primary advantage of synthetic fibers over natural fibers in terms of maintenance? a) Higher flammability b) Greater environmental impact c) Reduced durability d) Easier care and resistance to wrinkles	K1	CO2
	4	The spinning method that uses a chemical bath to solidify the fiber from a polymer solution is called a) Melt spinning b) Dry spinning c) Wet spinning d) Air spinning	K2	CO2
3	5	The primary goal of mixing and blending in spinning preparatory processes is to a) Achieve uniform fibre characteristics and qualities b) Remove short fibres from the batch c) Spin fibers into yarn d) Opening and cleaning the fibres	K1	CO3
	6	The combing process is designed to a) Remove short and irregular fibres b) Open and clean the fibre batch c) Blend different fibre types d) Spin fibres into yarn	K2	CO3
4	7	What is the primary role of the simplex machine in yarn production? a) To card the fibers b) To spin the fibers into yarn c) To prepare roving for spinning d) To dye the yarn	K1	CO4
	8	In the drafting process, what does the term "drafting" refer to? a) The process of blending fibres b) The process of drawing out and thinning the fibre strand c) The process of spinning fibres into yarn d) The process of winding yarn onto bobbins	K2	CO4
5	9	What does TFO stand for in yarn manufacturing? a) Twist and Fibre Orientation b) Two-Fold Overlap c) Twist and Fibre Overlap d) Twist and False Twist	K1	CO5

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5	10	Identify the primary cause of yarn breakage at the winding stage a) High moisture content in fibres b) Improper tension adjustments c) Incorrect texturization temperature d) Uneven fiber length	K2	C05
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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.	Explain how silk's sensitivity to acids and other chemicals affects its processing and final appearance.	K2	CO1
	(OR)			
	11.b.	Describe the manufacturing process of cotton fibres.		
2	12.a.	Apply your knowledge of addition polymerization to describe how it is used to create a specific synthetic fibre.	K3	CO2
	(OR)			
	12.b.	Explain how casein fibers are processed from milk protein.		
3	13.a.	Identify the main functions of the carding machine in the fibre preparation process.	K3	CO3
	(OR)			
	13.b.	Apply the concept of blowroom operations to evaluate its efficiency in removing impurities from fibre batches.		
4	14.a.	Analyze how different drafting techniques influence the final yarn texture and strength.	K4	CO4
	(OR)			
	14.b.	Evaluate how the doubling process can be optimized to improve yarn strength and uniformity.		
5	15.a.	Analyze the texturization process in detail.	K4	CO5
	(OR)			
	15.b.	Compare the causes and remedies for yarn faults such as slubs and breakage.		

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	Analyze the types of retting processes and its impact on the final properties of jute fibre.	K4	CO1
2	17	Analyze how the physical and chemical properties of viscose fibers influence their performance in moisture management and comfort.	K4	CO2
3	18	Categorize the impact of different ginning methods on the quality of cotton fibers and the subsequent spinning process.	K4	CO3
4	19	Evaluate the impact of rotor spinning machine settings on yarn properties and production efficiency.	K4	CO4
5	20	Compare the structural differences between fancy yarns and standard yarns and analyze their impact on fabric aesthetics.	K4	CO5