

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)  
ORGANISATION OF ISLAMIC COOPERATION (OIC)

**DEPARTMENT OF BUSINESS AND TECHNOLOGY MANAGEMENT**

Final Examination

Summer Semester, A. Y. 2022-2023

Course No. : BTM 4661

Time : 3 hours

Course Title : Textile Technology

Full Marks : 150

Answer **all 6 (six)** questions. All questions carry equal marks. Marks of each question and corresponding CO and PO are written in the right margin within brackets.

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|-------|---|----|----------------|
| 1. a) | How does the textile industry in Bangladesh contribute to poverty alleviation and socio-economic development?                                   | 08 | (CO2)<br>(PO2) |
| b)    | Briefly outline the key characteristics of natural fibers commonly used in textile production.  | 07 | (CO2)<br>(PO2) |
| c)    | Write down the detail classifications of natural and synthetic fibre which are commonly used in textiles.                                       | 10 | (CO2)<br>(PO2) |
| 2. a) | What are the primary characteristics of cotton fiber that make it a popular choice in the textile industry?                                     | 10 | (CO1)<br>(PO1) |
| b)    | Draw a relationship among ton fibre, fibrils, molecules and glucose of cotton fibre   | 10 | (CO1)<br>(PO1) |
| c)    | Write down the chemical composite of cotton fibre.  | 05 | (CO2)<br>(PO2) |
| 3. a) | Define the term polymers, monomer, polymerization and degree of polymerization?   | 05 | (CO1)<br>(PO1) |
| b)    | Classify polymers. How to identify syndiotactic and atactic polymer? Give examples.   | 10 | (CO3)<br>(PO3) |
| c)    | Differentiate between thermoplastic thermoset polymers.   | 10 | (CO2)<br>(PO2) |
| 4. a) | What do you mean by the term mixing and blending in textile spinning? What sort of mixing procedures are popular in cotton spinning operations? | 10 | (CO2)<br>(PO2) |
| b)    | Write the objectives of blow room section in spinning. How to find out the comber wastages during combing operation in spinning mills?          | 10 | (CO3)<br>(PO3) |
| c)    | Why combing is necessary to produce top quality cotton yarn?  | 05 | (CO2)<br>(PO2) |
| 5. a) | Define English and metric count system.   | 05 | (CO1)<br>(PO1) |
| b)    | Write the basic difference between woven and knit fabric. Write the flow chart of woven fabric production                                       | 10 | (CO2)<br>(PO2) |

	c)	Write the functions of basic elements in knitting operation. Write the characteristic features of plain or single jersey knit structure.	10	(CO2) (PO2)
6.	a)	Write the importance of pretreatment process for woven and knit fabrics before dyeing operation.	05	(CO2) (PO2)
	b)	What are the changes are desirable after scouring of cotton fibre before applying dyestuffs? Write the parameters for peroxide bleaching.	10	(CO2) (PO2)
	c)	How is pattern grading applied in apparel? Write process sequence of apparel production system popular in our ready-made garment industry.	10	(CO3) (PO3)