DIPLOMA IN TEXTILE ENGINEERING SYLLABUS
PROBIDHAN-2022
7TH SEMESTER

SL No	Subject Code	Name of the Subjects	Periods & Credits			Marks				
			T	P	C	Theory		Practical		Total
						Cont	Final	Cont	Final	
1	1972	Advanced Short Staple Spinning	3	3	4	30	120	25	25	200

This course will be conducted by: Md. Obydullah Al Masum

1) **Learning Outcome (Theoretical/Knowledge):**
   1. To develop advance knowledge of special type short staple spinning.
   2. To enable to understand the concepts of open end spinning machinery.
   3. To develop the knowledge of blended yarn.

Detailed Syllabus (Theory)

Unit	Topics with Contents	Final Marks
1	**Understand the Concept of modern spinning machinery from Blow room to Ring frame.** 1.1 State the name and function of machineries used in modern Blow room. 1.2 Describe the modern development of Carding machine. 1.3 Discus the development of drawing frame. 1.4 Describe the point to development in computerize Simplex and Ring frame	
2	**Understand the polyester and cotton blended yarn processing.** 2.1 State the importance of blended yarn 2.2 State the properties of fibres considered for p/c blended yarn. 2.3 Mention the blending ratio of polyester & cotton for different count of p/c blended yarn	

	2.4 Show the flow chart of p/c blended yarn production. 2.5 Learn the blended test. 2.6 Mention the necessary changes/works to be done for p/c blended yarn production from blow room section to ring frame 2.7 Solve the relevant problems of p/c blended yarn production.	
3	**Understand viscose cotton blended yarn.** 3.1 Mention the flow chart of viscose cotton blended yarn production. 3.2 Discus the different of p/c & v/c blending process. 3.3 List the properties of viscose- cotton blended yarn. 3.4 Describe merits and demerits, uses of viscose- cotton blended yarn.	
4	**Understand Core yarn spinning.** 4.1 Define core spun yarn. 4.2 Discuss the method of manufacturing core-spun yarn by Ring frame. 4.3 Mention the raw material requirements for core- spun yarn. 4.4 Describe the application of core-spun yarn. 4.5 State the properties of core yarn.	
5	**Understand open end spinning.** 5.1 Define the open end spinning. 5.2 Mention the flow chart of open end spinning. 5.3 Discuss briefly the following modern spinning system. a). Air Jet spinning. b). Votex spinning c). Electrostatic spinning. d). Friction spinning.	
6	**Understand Rotor spinning.** 6.1 State Rotor spinning. 6.2 Discuss working principle of Rotor spinning. 6.3 Mention the merit & demerits of Rotor spinning. 6.4 Define Rotor deposit. 6.5 Describe the minimize of Rotor deposit. 6.6 Solve the relevant problems of rotor spinning. 6.7 Mention compare the Rotor yarn with Ring yarn.	
7	**Understand about modern yarn product.** 7.1 Discus the fancy yarn Manufacturing process. 7.2 Discus the mélange yarn Manufacturing process. 7.3 Discus the slub yarn production process. 7.4 Discus the compact yarn production process.	
8	**Understand spin plan** 8.1 State the importance of spin plan 8.2 Mention the factors to be considered for calculation spin plan. 8.3 State parameters, types of parameters and value of different parameters for	

	different count and systems (conventional, modern) 8.4 Prepare spin plan for different count 2 system (conventional, modern)	
9	**Understand process control.** 9.1 State the waste control of short spinning process. 9.2 State types of wastage produce in cotton spinning process. 9.3 Recycling wastage produce in cotton spinning process.	
10	**Understand the yarn production cost.** 10.1 Define costing. 10.2 Classify the different types of cost involve in spinning mill. 10.3 Analysis the fixed cost, variable cost, of spinning mill. 10.4 Calculate the break-even point of spinning mill.	
	Total	

Detailed Syllabus (Practical)

Unit	Topics with Contents	Final Marks
1	**Draw the machine diagram of blow room machineries** **a). Uni clen** **b). Uni flex.** **c). Uni mix.**	
2	**Draw the Rotor spinning m/c. and indicate the different part.**	
3	**Draw the Air Jet spinning m/c. and indicate the different part.**	
4	**List the change places from blow room to Ring frame.**	
5	**List the change places from blow room to Ring frame for p/c blend yarn production**	
6	**List the change places from blow room to Ring frame for viscose cotton blend yarn production.**	

7	**Sketch and show core yarn cross-section.**	
8	**Sketch and show the slub yarn parameter.**	
	Total	