



**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	
						Cont	Final	Cont	Final

6	1977	Textile Calculation-II	2	0	2	20	80	-		100
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This course will be conducted by: Md. Obydullah Al Masum

1) Learning Outcome (Theoretical/Knowledge):

- To develop the basic knowledge to calculate
 - a) Winding b) Warping c) Sizing d) Loom and knitting production.
 - e) Read count and heald count. f) Fabric calculation g) Fabric requirement in garment. h) Sewing thread consumption j) Costing

Detailed Syllabus (Theory)

Unit	Topics with Contents	Final Marks
1	Understand the calculation of winding 1.1 Calculate the speed of drum by gearing sketch of spool winding. 1.2 Calculate the traversing rate & production of spool winding. 1.3 Calculate the speed of pirn spindle by gearing sketch of pirn winding. 1.4 Calculate the production of pirn winding. 1.5 Solve the problems.	
2	Understand the calculation of warping 2.1 Calculate the production of warping by gearing sketch of machine. 2.2 Calculate the number of ends for specific beam & fabric. 2.3 Calculate the total number of yarn package required for specified fabrics.	

	2.4 Solve the problems.	
3	Understand the calculation of sizing. 3.1 Calculate the production of sizing by gearing sketch of machine. 3.2 Calculate the size pick-up percentage 3.3 Calculate the number of ends for specified fabrics. 3.4 Calculate the different amount of size ingredients. 3.5 Solve the problems.	
4	Understand the heald count & reed count 4.1 Define heald count & reed count. 4.2 List the different types of heald count & reed count. 4.3 Calculate the heald count & reed count. 4.4 Calculate the drop wire & heald wire for different types of fabric. 4.5 Solve the problems.	
5	Understand the loom and knitting calculation and production. 5.1 Select the heald and reed for different types of fabric production. 5.2 Calculate the loom constant & picks per inch. 5.3 Calculate the speeds of crank shaft & bottom shaft by gearing sketch. 5.4 Calculate loom and knitting efficiency & production. 5.5 Solve the problems.	
6	Understand the fabric calculation. 6.1 Mention the warp & weft requirement for weaving. 6.2 List the different types of fabric specification (woven and knitted fabric). 6.3 Calculate the weight of warp yarn & weight of weft yarn for specified woven fabric. 6.4 Calculate the weight of cloth in ozs/sq yd and gms/sq-meter. 6.5 Solve the problems.	
7	Understand the dye requirement in dyeing section. 7.1 Mention the factors of selection of dye recipe. 7.2 Calculate the amount of different dyes & chemicals for different dye recipe. 7.3 Calculate the required dye liquor solution for different recipe. 7.4 Calculate the shade percentage for different dyeing. 7.5 Solve the problems.	
8	Understand the cloth requirement of garments. 8.1 State the term fabric consumption. 8.2 Describe the method to find out the fabric consumption. 8.3 Find the requirement of fabric for type & sizes of garments. 8.4 Solve the problems.	
9	Understand the sewing thread consumption.	

	9.1 Describe the methods to find out the thread consumption. 9.2 Mention the factors of thread consumption of the garments. 9.3 Calculate the thread consumption for specified garments.	
10	Understand the calculation of costing. 10.1 Mention the factors of costing. 10.2 Calculate the cost of yarn production. 10.3 Calculate the cost of fabric production for fabric manufacturing. 10.4 Calculate the cost of dyed fabric production for wet processing. 10.5 Prepare a costing sheet of sewing thread for producing shirt & trouser. 10.6 Calculate the cost of garments production for clothing technology. 10.7 Calculate waste in over process maximum utilization for production. 10.8 Machinery selection i.e high speed machine, low energy consumption machine, minimum manpower, low add-on system. 10.9 Re Process control. 10.10 Recovery system. 10.11 R.F.T (Right First Time)	
	Total	