Lesson Plan

Name of Faculty : Tejendra Singh
Discipline: Textile Technology Semester:
5th
Subject: **SPINNING TECHNOLOGY-III**

Lesson Plan Duration: 15 weeks (Sept.-2020-21)
Work Load (Lecture / Practical) Per week (in hours): Th= 4 per week / pr =1

Week	Theory		Practical	
	Lecture day	**Topic (including assignment / test)**	**Practical day**	**Topic**
1st	1st	Introduction and objectives of a Ring Frame	1st	Practice of passage of material through Ring Frame. Practice of drafting roller settings. Mill visit Be arranged to see top arm weighing system
	2nd	nomenclature of various parts of a Ring Frame, passage of material through it		
	3rd	Drafting, function of the drafting system		
	4th	study of top arm drafting system, apron drafting, advantages of apron drafting.		
2nd	5th	Introduction to rings, sizes and different types of rings, ring travellers, its functions	2nd	Practice on ring and ring traveller, spindle gauge/setting. Selection of ring travellers for different Counts
	6th	types of ring travellers, their sizes. Numbering of ring travelers		
	7th	Insertion on of twist into the yarn, S and Z twists,		
	8th	effect of twist on yarn, selection of TM for various counts, ring and travellers speeds		
3rd	9th	Building motion mechanism, insertion of coil on bobbin.	3rd	Practice of inserting S and Z twist in the yarn and draw sketches.
	10th	Yarn ballooning, yarn ballooning control rings, separators, lappets		
	11th	Reasons for end breaks and their remedies on Ring Frame		
	12th	Principle of Auto doffing at Ring Frame		
4th	13th	Principle of variable pulley speed at Ring Frame	4th	Practice of drawing and setting of building motion of ring frame.
	14th	Work load distribution at Ring Frame		
	15th	Gearing diagram of Ring Frame		
	16th	Gearing diagram of Ring Frame		

5th	17th	Gearing diagram of Ring Frame	5th	Practice of drawing gearing diagram of Ring Frame. Calculation of spindle speed and Front Roller speedof Ring Frame and calculation of Production of machine per shift.
	18th	Calculation of spindle speed, front roll speed,		
	19th	production per shift per machine		
	20th	Calculation of total draft,		
6th	21th	**Sessional 1**	6th	Calculation of total draft, break draft and individual zone draft.
	22th	Calculation of break draft and individual zone draft.		
	23rd	Calculation of twist per inch.		
	24th	Calculation of twist multiplier.		
7th	25th	Calculation of production constant, draft constant	7th	Calculation of TPI and Twist Multiplier ™
	26th	break draft constant and twist constant.		
	27th	Calculation of traveler speed		
	28th	Calculation of yarn content on bobbin		
8th	29th	Objects of Ring Doubling, Doubling,and its effects	8th	Calculation of production constant, draft constant, break draft constant and twist constant.
	30th	Objects of dry and wet systems of doubling		
	31th	Twist insertion in ply yarn, types and amount of twist.		
	32th	Factors effecting the multiplier for double yarn		
9th	33rd	Yarn defects and their causes and remedial measures in doubling machine (Expert Lecture)	9th	Calculation of traveler speed. Calculation of yarn content on bobbin
	34th	Yarn defects and their causes and remedial measures in doubling machine (Expert Lecture)		
	35th	Improvement in quality and productivity performance of a doubling machine (Expert Lecture		
	36th	Improvement in quality and productivity performance of a doubling machine (Expert Lecture		

10th	37th	Working principle of TFO	10th	Practice of passage of yarn through Ring Doubling Machine. Different parts and their working.
	38th			
	39th	Gearing diagram showing various drives of a Ring Doubling Machine		
	40th	Gearing diagram showing various drives of a Ring Doubling Machine		
11th	41th	**Sessional 2**	11th	Practice to find the direction of twist in ply yarn.
	42th	Calculation of production per machine,		
	43th	Calculation of production constant		
	44th	Calculation of spindle speed,		
12th	45th	Calculation of delivery Roll speed	12th	Demonstration of working of TFO during mill visit / training
	46th	Calculation of twist per inch/twist Multiplier		
	47th	Calculation of twist constant of the Machine		
	48th	Calculation of different types of yarn's diameter		
13th	49th	Calculation of different types of yarn's diameter	13th	Practice of drawing gearing diagram on Ring Doubling Machine
	50th	Calculation of balancing of machines in different sections for a particular spin plan requirement		
	51th	Calculation of balancing of machines in different sections for a particular spin plan requirement		
	52th	Sequence of machinery used in the production of Woolen System		
14th	53th	Sequence of machinery used in the production of Worsted system	14th	Calculation of production per machine and production constant. Calculation of spindle speed, delivery roll speed
	54th	Difference between Woolen & Worsted yarn		
	55th	**Sessional 3**		
	56th	Difference between Woolen & Worsted yarn		
15th	57th	Various maintenance schedules adopted in a frame	15th	Calculation of twist per inch/twist Multiplier and twist constant of the Machine
	58th			
	59th	Process control Parameter with reference to productivity		
	60th	Process control Parameter with reference to yarn quality		