

Lesson Plan

Name of Faculty: Tejendra Singh (Theory +Practical)

Semester: 4th

Lesson Plan Duration: 15 weeks

Discipline: Textile Technology

Subject: SPINNING TECHNOLOGY-II

Work Load (Th/ Pr.) / week (in hours): Th- 3 /Pr. -4

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical day	Topic
1 st	1 st	Objects of drawing, passage of material through Draw Frame and functions of different parts	1 st	Demonstrate the passage of material through Draw Frame
	2 nd	Weighting systems for top rollers on modern draw frame		
	3 rd	Factors affecting the roller settings in Draw Frame	2 nd	Roller setting of drafting rollers on draw frame
	4 th	Importance and study of various stop motion on modern draw frame		
2 nd	5 th	Object, Principle and working of autoleveler at draw frame, type of auto leveller.	3 rd	To study the various stop motion
	6 th	Work load distribution in draw frame deptt.		
	7 th	Calculations of Speeds, Drafts, Total Drafts, Draft Constant, Tension Draft, Production and Production Constant	4 th	Study of various electronic parts and motion of draw frame
	8 th	Importance and uses of cotton combing sequence of machinery used for the manufacture of combed yarn (conventional and modern)		
3 rd	9 th	Preparatory machines for combing and their role	5 th	Practice gearing diagram on draw frame machine.
	10 th	Silver Lap Machine (SLM) - its objectives, nomenclature of various parts of SLM,		
	11 th	Functions of various parts of SLM	6 th	Calculations of speeds of various parts, total drafts, draft constant, tension draft, production and production constant
	12 th	Passage of material through the SLM machine		
4 th	13 th	Ribbon Lap Machine (RLM) -its objects, nomenclature	7 th	Sketch and describe the working of SLM
	14 th	Functions of various parts, passage through the RLM		
	15 th	Drawing, Lap Formation Combination Lap Winder, Within Super Lap Machine and its advantages over Silver Lap Machine	8 th	Practice of gearing diagram of silver Lap Machine (during mill visits/ industrial training)
	16 th	Drawing, Lap Formation Combination Lap Winder, Within Super Lap Machine and its advantages over Silver Lap Machine		
5 th	17 th	Expert lecture 1	9 th	Demonstration of Ribbon Lap machine, passage through the machine, Practice of gearing diagram of Ribbon Lap machine
	18 th	Principles , objectives, evaluation of combing Historical development of combing, degree of combing damages occurring to textile materials during the preparatory processes		
	19 th	Historical development of combing, degree of combing damages occurring to textile materials during the preparatory processes	10 th	Demonstration on comber machine, working of various parts and passage through the comber machine
	20 th	Description and working of various parts, passage of material through modern comber		
6 th	21 th	Sessional 1	11 th	Demonstration and practice of combing cycle with reference to relative position of various parts and index numbers
	22 th	Combing cycle with reference to relative position of various parts,		
	23 rd	Combing cycle with reference to index numbers	12 th	Demonstration of comber cylinder, top comb, nippers
	24 th	Combing cycle with reference to index numbers		

7 th	25 th	Study of comber cylinder	13 th	Practice of drawing of gearing diagram of comber: Calculate draft, draft constant, production and production constant
	26 th	Top comb, detaching rollers, nippers		
	27 th	Motions and mechanisms of nippers	14 th	Demonstration of mechanisms of nippers, top comb, detaching roller to see their working with the help of a sketch
	28 th	Top comb mechanism		
8 th	29 th	Detaching roller mechanism	15 th	Practice of setting and gauges of following parts. - Cylinder to brush - Cylinder to nippers - nippers settings - Top comb settings
	30 th	Method of finding comber noil percentage		
	31 th	Factors upon which comber noil depends	16 th	Study of various electronic parts and motion in RIL, SIL, comber
	32 th	How to control comber noil percentage		
9 th	33 rd	Sessional 2	17 th	Modern development to be seen in the mills during mill visits/mill training
	34 th	Difference between carded and combed yarn		
	35 th	Comparison between carded and combed yarn	18 th	Demonstration and practice for the passage through the simplex machine
	36 th	Modern developments in combing (Expert Lecture)		
10 th	37 th	Expert Lecture 2	19 th	Practice of setting drafting rollers
	38 th	Introduction and object of Simplex Frame. Nomenclature of various parts, passage of material through the machine		
	39 th	Drafting mechanism, setting and weighting of drafting rollers	20 th	Mill visit be arranged to see the working of drafting systems on modern Simplex Frames
	40 th	Various drafting systems used in modern Simplex Machine		
11 th	41 th	Twists, selection of twist, Twist multiplier, method of twisting	21 th	Practice of drawing diagram for the insertion of twist in roving on the machine
	42 th	Flyer and its function		
	43 rd	Principle of winding	22 th	Practice of drawing of building motion and its operation
	44 th	Bobbin leading and flyer leading system		
12 th	45 th	Coiling of roving	23 th	Study and practice of construction and working of differential motion and its operation
	46 th	Objective of building motion,		
	47 th	Construction of building motion,	24 th	Practice of drawing full gearing diagram on the machine showing various drives
	48 th	Working of building motion.		
13 th	48 th	Objectives, principle of differential motions	25 th	Mantling and dismantling of draft change pinion, twist, change wheel, lifter change wheel and ratchet wheel.
	49 th	Used on modern Simplex Machine		
	50 th	Sessional 3	26 th	Modern developments will be shown in the mill (Mill visit)
	51 th	Modern development in the Simplex Machine		
14 th	52 th	Calculation of production per machine, per shift; calculation of front roll delivery and spindle speed, twist per inch and twist multiplier;	27 th	Practice of gearing diagram of simplex frame
	53 rd	Expert Lecture 3		
	54 th	Calculation of production constant, draft constant, break draft constant and twist constant;	28 th	calculations relating to parameters as specified in theory
	55 th	Calculation of total draft, break draft and individual zone draft of the machine		
15 th	56 th	Calculation of ratchet wheel	29 th	study of various electronic parts and motion in speed frame
	57 th	Calculation of lifter change wheel		
	58 th	Draft change pinion for various hanks with the help of gearing diagram of Simplex frame	30 th	study of various electronic parts and motion in speed frame
	59 th	Draft change pinion for various hanks with the help of gearing diagram of Simplex frame		