Marks	Grade Point	Letter Grade	*Marks*	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Daffodil Polytechnic Institute, Institute Code: 50238

Mark Distribution (for 200 Marks)			
Theory Marks		**Practical Marks**	
Midterm	30	PC	25
Class test	20	PF	25
Quiz test	10	-	-
Final	90	-	-
Total	**150**	-	**50**

Time Distribution (90min)		
	Particular	Time
Greeting with students		**5 Min**
Previous class review		**10 Min**
Present class lecture		**60 Min**
Feedback		**10 Min**
Attendance		**5 Min**

Lesson Plan – Academic session: july to December 2023

Subject Teacher : Sabina Yasmin (Instructor)
Subject Name : Yarn Manufacturing-II
Subject Code 21142
Technology : Textile
Semester : 1st
Reference Book : Yarn Manufacturing-II (Publisher: prime & R.S)
eLearning Course Link : https://dpi.df.daffodil.family/slides/physics-1-12

Subject Aims:

Students need to gather basic knowledge and skill on overall process of the yarn manufacturing technology as well as machinery mainly Lap former, Comber, Simplex, Ring frame, Jute draw frame, Flyer spinning, Winding and Yarn finishing. By acquiring that knowledge, skills and attitude students will be able to know Yarn Manufacturing Technology-II as well as able to study in further courses

Subject Outcome:

After undergoing the subject, students will be able to: • Describe the operation of Lap former, Comber, Simplex and Ring frame. • Illustrate the operation of Jute draw frame, Jute spinning

frame, Winding machinery. • Mention the quality parameters of input and output materials of different machineries. • Classify yarn manufacturing machinery. • Mention the process sequence of different yarn manufacturing. • Describe the basic principles of yarn manufacturing process. • Solve the production related problems. • Describe yarn winding and finishing process. • Explain faults, causes and remedies of different sections of yarn manufacturing. Concept of Electron and photon; Structure of atom, Theory of Relativity.

Lecture	Chapter/ Exam / Industrial Visit	Learning Area	Learning Outcome	Class/Lab Supporting Equipment's
01	**Chapter-01 Lap Former**	Lap Former 1.1 State the objectives of Lap former. 1.2 Mention functions of Lap former. 1.3 Describe the material path diagram of Lap former. 1.4 Describe working principle of different Lap former. 1.5 Discuss the necessities of lap preparation before Combing. 1.6 State the Lap former stop motions. 1.7 Mention the purposes of Lap former stop motions. 1.8 Discuss causes and remedies of wastages produced during lap preparation.	1. Our student can understand nature of Physical World. 2. Students know about deference units in our life. 3. Get feedback.	Internet Projector Slide
02	**Chapter-02 Comber**	Comber 2.1 Define Combing process. 2.2 State the objectives of Comber machine. 2.3 Mention functions of Comber machine. 2.4 List the types of Comber machine.	1. Student know about vector and scalar quantities. 2. Stop know measure vector by applying laws of triangle. 3. Get feedback.	Internet Projector Slide

03	Chapter-02 **Comber**	2.5 Illustrate the material path of Comber machine. 2.6 Discuss basic principle of Combing machine with sketch. 2.7 Illustrate working principle of Combing machine. 2.8 Describe Combing cycle with sketch. 2.9 Mention function of Index wheel..	1. Our student can resolve a vector into horizontal & vertical component. 2. Our student able to solve dot and cross product. 3. Get feedback.	Internet Projector Slide
Assignment-01		**Assignment on lecture** **01 - 03**	**To build up their confidence level & increase creativity on chapter- 01 & 02**	**Must be submitted within the next two lecture.**

04	**Chapter-03** **Wastage and Faults of Comber**	Wastage and Faults of Comber 3.1 Explain Draw box. 3.2 State the setting points of Comber. 3.3 Explain the changes of setting points and effects on changing in Comber machine. 3.4 List wastes produced in Comber machine. 3.5 Discuss the waste control process in Comber.	1. Our student to know about difference motion in our life. 2. There can Classify and explain of motion. 3. Get feedback.	Projector, Internet. slide **Link-**
Lab Report-01		**1.**	**1. .**	**Must be submitted within the next two Lab classes.**

05	**Chapter-03** **Wastage and Faults of Comber**	3.6 Mention the factors influence the amount of noel. 3.7 Define degree of Comber machine. 3.8 Classify the degree of Comber machine. 3.9 Discuss the causes and remedies of wastages 3.10 Calculate draft, production and efficiency of Comber machine..	*Gather a good knowledge about projectile.	Projector, Internet. slide Link:
06	**Chapter-03** **Wastage and Faults of Comber**	Review this chapter	*the end of the lesion our students able to solve mathematical term in chapter-3	Text Book

07	**Quiz Test-01** **&** **Class Test-1** (Result will be published within the next two classes)	Difference mathematical problem in text.	*To build up their confidence level in chapter-4,5 & 6	Projector, Internet.
08	**Chapter-04** **Simplex**	Simplex 4.1. Mention the objectives of Simplex. 4.2 State the functions of Simplex. 4.3 Explain the importance of Simplex. 4.4 Illustrate material path diagram of Simplex. 4.5 Describe working principle of Simplex. 4.6 Explain drafting and twisting. 4.7 Discuss different drafting system. 4.8 Differentiate between roller and apron draft. 4.9 Illustrate twisting mechanism. 4.10 Discuss twist multipliers.	Equation of motion of a freely moving body thrown obliquely vertically upward or motion of a projectile in life. *newton law and *motion	Projector, Internet. slide **Link-**

09	**Chapter-05** **FORCE AND FRICTION**	Winding and Building mechanism of Simplex. 5.1 Define roller setting of Simplex machines. 5.2 State the considering factors of roller setting. 5.3 Discuss the change places and effects of changing in Simplex machine. 5.4 Mention the objectives of building motion. 5.5 State the functions of building motion. 5.6 Illustrate building mechanism of simplex machine. 5.7 Describe differential motion. 5.8 List the Name of wastages produced in Simplex machine. 5.9 Calculate roving hank, draft, twist, speed, production and efficiency of Simplex machine	Prove that the co-efficient of static friction is equal to the tangent of angle of repose. Mention the merits and demerits of friction. Solve the problems related with Force and Friction..	Projector, Internet.
Assignment-02		**Assignment on lecture** **04– 09**	**To build up their confidence level & increase creativity on chapter- 04- 09**	**Must be submitted within the next two lecture.**
10	**Chapter-06** **Ring Frame**	Ring Frame 6.1. Mention the objectives of Ring frame. 6.2 State the functions of Ring frame. 6.3 List the important components of Ring frame. 6.4 Illustrate material path of Ring frame. 6.5 Describe working principle of Ring frame. 6.6 Discuss the causes and remedies of yarn faults...	The end of the lesson our student understand Ring Frame	Projector, Internet. slide **Link-**

11	**Chapter-06** **Roller setting**	Roller setting 7.1 Define roller setting of Ring frame. 7.2 State the factors influencing roller setting in Ring frame. 7.3 Describe the changing places and effects of changing in Ring frame. 7.4 State the importance of roller setting in Ring frame. 7.5 Discuss the causes and remedies of yarn breakage in Ring frame.	1. Know about why 'g' variation at different places.	Projector, Internet. slide **Link-**
Lab Report-02				**Must be submitted within the next two Lab classes.**

12	**Class Text-02** **And** **Quiz Test-02** (Result will be published within the next two classes)	Difference mathematical problem in text.	*To build up their confidence level in chapter-4,5 & 6	Projector, Internet. And text book
13	**Chapter-07** **Drafting and Twisting of Ring frame**	**Drafting and Twisting of Ring frame** **8.1 Explain drafting and twisting.** **8.2 Describe different drafting system.** **8.3 Illustrate twisting mechanism.** **8.4 Discuss twist multipliers.**	*to know about pendulum	Projector, Internet. **Slide** **Link:**

14	**Chapter-07** **Drafting and Twisting of Ring frame**	**8.5 Mention types of Rings, Travelers and Spindles.** **8.6 State the functions of Ring, Traveler, Spindle, Spacer, Cradle arbour roller, Cot roller and Arm pressure.** **8.7 Describe the building motion of Ring frame.** **8.8 Calculate draft, twist, speed, production and efficiency of Ring frame.**	To know about the laws of simple pendulum.	Projector, Internet. **Slide** **Link:**
Lab Report-03				**Must be submitted within the next two Lab classes.**
15	**Model test**		Our students will be ready for exam.	Pen, pencil, eraser, calculator

Mid Term Exam

16	**Chapter-09** **Winding and Finishing**	**Winding and Finishing** 9.1 State objectives of yarn conditioning. 9.2 Describe the process of yarn conditioning. 9.3 State the necessity of winding. 9.4 Describe the cone winding process. 9.5 Name the different yarn packages.	* To know about power and energy in our life.	Projector, Internet, slide **Link-**

17	**Chapter-09** **Winding and Finishing**	9.6 Describe the causes and remedies of winding faults. 9.7 Discuss the causes and remedies of package faults. 9.8 Explain the reeling process. 9.9 Describe the bundling and bailing process. 9.10 Calculate production and efficiency of winding..	*to build up their knowledge in difference energy.	Projector, Internet, slide **Link-**
18	**Class Test-03** **And** **Quiz Test-03** (Result will be published within the next two classes)	Difference mathematical problem in text.	*To build up their confidence level in chapter-4,5 & 6	Projector, Internet.
19	**Chapter-10** **Jute Draw Frame** **(1st, 2nd and 3rd)**	**Jute Draw Frame (1st, 2nd and 3rd)** 10.1 State the objectives of Jute drawing. 10.2 Mention functions of Jute drawing. 10.3 Mention the types of Jute drawing frame. 10.4 Illustrate the material path diagram of Jute Draw frame. 10.5 Describe working principle of push bar Draw frame. 10.6 Describe working principle of spiral Draw frame. Distinguish between push bar and spiral Draw frame.	*student deference between variety elastic body.	Projector, Internet, Slide **Link-**

20	**Chapter-11 Drafting in Jute Drawing Frame**	**Drafting in Jute Drawing Frame** 11.1 Define Faller bar, Reach, Nip and Faller Lead percentage. 11.2 Describe the relation between draft and doubling. 11.3 State the importance of auto stop motion, crimping of sliver, can packing arrangement, can coiling. 11.4 Compare among 1st, 2nd and 3rd Draw frame. 11.5 State the change places and effects on changing in Draw frame. 11.6 Mention the causes and remedies of faults in Jute draw frame. Calculate draft, lead percentage and production in Draw frame.	* student explain Poisson's ratio	Projector, Internet, Slide **Link-**
21	**Quiz text-04 Math solving** (Result will be published within the next two classes)	Difference mathematical problem in text.	*To build up their confidence level in chapter-07	Projector, Internet, Text book

23	**Chapter-12** **Jute Spinning frame of Jute**	**Jute Spinning frame of Jute** 12.1State the objectives of Flyer spinning frame. 12.2Mention functions of spinning frame. 12.3Classify the Flyer spinning frame. 12.4Illustrate the material path diagram of Flyer spinning frame. Describe working principle of Flyer spinning frame.	*can explain hydrostatics.	Projector, Internet, Slide **Link-**
24	**Chapter-13**	**Drafting and Twisting in Jute Spinning Frame** 13.1 Define drafting and twisting. 13.2 Describe the drafting systems in jute spinning frame. 13.3 Define slip and apron draft. 13.4 Distinguish between slip and apron drafting system. 13.5 Explain doffing. 13.6 Discuss twist factor for different count. 13.7 Define building motion. 13.8 Describe working principle of building motion. 13.9 Describe Lynex drive. Calculate draft, twist and production of Jute spinning frame.	*know about necessity of velocity.	Projector, Internet, Slide **Link-**
25	**Class test-04** **Math solving** (Result will be published within the next two classes)	Difference mathematical problem in text.	*To build up their confidence level in chapter-10	Projector, Internet. Text book

26	**Chapter-14** **Jute Winding and Finishing**	**Jute Winding and Finishing** 14.1 State the objectives of winding. 14.2 Mention the types of winding. 14.3 Describe mechanism of Cop winding machine. 14.4 Describe mechanism of Spool winding machine. 14.5 Mention the causes and remedies of winding faults. Calculate production and efficiency of winding machine.	1. Know about Viscosity and co-efficient of viscosity 2. Can explain why viscosity is needed for our life.	Projector, Internet. **Link-**
31	**Model test**		Our students will be ready for the exam.	Pen, pencil, eraser, calculator, scale.