B E III Textile Technology: Semester – VI

Subject Name: Fundamentals of Weaving **Subject Code: BTTT15601**

Type of course: Open Elective Course II

Prerequisite (if any): Students should have knowledge of basics of textile yarns.

List of Courses where this course will be prerequisite:

Rationale: This course covers the basics of fabric formation using plain power loom, shuttleless looms, dobbies and jacquards. This is considered to be one of the important processes of textile technology.

Teaching and Examination Scheme:

TEACHING SCHEME				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	
3	0	0	3	60	25	15			100

CA1: Continuous Assessment (assignments/projects/open book tests/closed book tests CA2: Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems TEE: Term End Examination TEP: Term End Practical Exam (Performance and viva on practical skills learned in course) CA3: Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in course

Content:

Sr. No.	Content	Total Hrs
1	Introduction to Yarn Preparatory processes. Warp and weft preparation processes. Objects, types, importance and methods of winding, pirn winding, warping and sizing processes.	8
2	Introduction to plain power looms. Objects, types, importance and principles of working of primary, secondary and auxiliary motions. Calculation of production.	10
3	Introduction to shuttleless looms. Objects, types, importance and principles of working of primary, secondary and auxiliary motions. Calculation of production.	10
4	Introduction to dobbies. Objects, types, importance and principles of working of dobbies.	7
5	Introduction to jacquards. Objects, types, importance and principles of working of dobbies.	7

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
10	20	20	5	5	0

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

Sr no	Title of book /article	Author(s)	Publisher and details like ISBN	Year of publication	Publication Edition
1	Principles of Weaving	Mark R, Robinson A T C	The Textile Institute, Manchester	1986	
2	Weaving – Machine, Mechanism and Management	Talukdar M K, Srirammulu P K and Ajgaokar D B	Mahajan Publisher Private Ltd., Ahmedabad, India	1998	
3	Plain Weaving Motions	K. T. Aswani	M/s. Mahajan Book Publishers, Ahmedabad	2007	
4	Advances in Modern Woven Fabrics Technology	Savvas Vassiliadis	In Tech	2011	
5	Principles of Fabric Formation	Prabir Kumar Banerjee	CRC Press		

Course Outcomes:

Sr. No.	CO statement	Marks % weightage
CO-1	Understand basics of yarn preparatory processes used for warp and weft preparation.	20
CO-2	Apply knowledge of different motions of plain power looms for production of different types of fabrics and calculate their production.	25
CO-3	Apply knowledge of different motions of shuttleless looms for production of different types of fabrics and calculate their production.	25
CO-4	Select the type of dobbies for given type of fabrics production.	15
CO-5	Select the type of jacquards for given type of fabrics production.	15

List of Open learning website: https://nptel.ac.in, brochures and manuals of machine manufacturer, World Wide Web, Google Search Engine etc.