

MAHARASHTRA STATE BOARD OF VOCATIONAL EXAMINATIONS, MUMBAI - 51.

1	Name of Syllabus	Certificate Course in Hand and power Weaving (402106)																																			
2	Max. No's of Student	25 students.																																			
3	Duration	6 Month																																			
4	Type	Part Time																																			
5	No Of Days / Week	6 Days																																			
6	No Of Hours /Days	4 Hrs																																			
7	Space Required	Workshop = 800 Sq feet <u>Class Room = 200 Sq feet</u> TOTAL = 1000 Sq feet																																			
8	Entry Qualification	6 th Pass																																			
9	Objective Of Syllabus/ introduction	To prepare skilled handloom & Power loom weaver																																			
10	Employment Opportunity	a) Self Employments : - May start small business in the field of Textile Handloom & power loom. b) Wage Employment: - 1) May work as a skilled weaver in small scale industry or textile mills.																																			
11	Teacher's Qualification	Diploma in Handloom Technology.																																			
12	Training System	Training System Per Week <table><tr><td>Theory</td><td>Practical</td><td>Total</td></tr><tr><td>6 Hours</td><td>18 Hours</td><td>24 Hours</td></tr></table>							Theory	Practical	Total	6 Hours	18 Hours	24 Hours																							
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13	Exam. System	<table><tr><td>Sr. No.</td><td>Paper Code</td><td>Name of Subject</td><td>TH/PR</td><td>Hours</td><td>Max. Marks</td><td>Mini. Marks</td></tr><tr><td>1</td><td>40210611</td><td>Hand & Power loom Weaving</td><td>TH-I</td><td>3 hrs.</td><td>100</td><td>35</td></tr><tr><td>2</td><td>40210621</td><td>Weaving Preparatory</td><td>PR-I</td><td>3 hrs.</td><td>100</td><td>50</td></tr><tr><td>3</td><td>40210622</td><td>Weaving</td><td>PR-II</td><td>6 hrs.</td><td>200</td><td>100</td></tr><tr><td></td><td></td><td>Total</td><td></td><td></td><td>400</td><td>185</td></tr></table>	Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Mini. Marks	1	40210611	Hand & Power loom Weaving	TH-I	3 hrs.	100	35	2	40210621	Weaving Preparatory	PR-I	3 hrs.	100	50	3	40210622	Weaving	PR-II	6 hrs.	200	100			Total			400	185
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THEORY - I Hand & Power loom Weaving

Hand & Power loom Weaving

Different forms in which warp and weft yarn is available to a hand loom and power loom weaver. Object of preparation of Warp and Weft yarn prior to proper weaving. Different processes and their sequence for warp preparation depending upon the form such as hank, cone or cheese in which the warp yarn is obtained (Winding sizing. Warping, beaming, drawing – in) Equipment used for the above process in handloom and powerloom industry. Gaitting a warp beam on a loom.

Breakage Rates in winding, warping & sizing processes General idea about the preparatory process followed in a composed Textile Mill.

Size Mixing :- Object of sizing the warp Yarn. Classification of ingredients used in a size mix. Common ingredients belonging to each class. Their properties and special characteristics. Method of preparing a size mixing. Quantities of ingredients to be used size percentage.

Preparation of weft yarn for weaving. Equipment used in Hand loom and powerloom industries. Effect of defective weft preparation during, weaving.

PRACTICAL - I - Weaving Preparatory

Handloom :- Types of looms in/present use. Names and function of different parts of a handloom. Primary operations of handloom such as shedding, picking and beating up. Secondary operations such as governing the tension on warp sheet, winding up the woven cloth., governing the rate of cloth winding, Temples etc. Types of Healds, Reeds, Shuttles, pirns, Pickers and other accessories of a handloom. Multiply Box loom (Hand-loom) on Drop Box and Revolving Box principles. Handloom dobbies their construction and operation. Method of pegging for different structures of cloth Handloom Jacquard, its construction and operation. Harness and comb board. Card cutting machine, method of cutting cards and lacing them.

Powerloom :- Different parts of powerloom and their functions, primary motions- Tappet shedding for plain weaving loom, over and under picking, Beating up. Secondary motions warp tension governing motion, Take up motion with pick wheel calculations. Loose reed motion, weft fork motion, oscillating back rest, check strap etc. setting of the above primary and secondary motions production and efficiency a loom. Loom speeds for different widths of looms. Dobby machine. Construction and working of a keighley Dobby, Right hand and left hand dobbies, method of pegging for right hand and left hand dobbies. Setting the knives, LAG Barrel Ratchet wheel, and star wheel method of altering the size of the shed. Dobby mounting.

Drop Box: - Eccle's Drop Box motion. Names of different parts and their 5 functions, construction and working. Setting the crank or eccentric, cylinder cam, racks, and the pattern cylinder. Locking Leveling and Safety devices. Card saving device-its function only making pattern chain (without using card saving device).

Jacquards: - Construction and working of a single lift and double lift, single and double cylinder and cross border jacquards, straight and cross harness ties. Setting the Knives and cylinder/s.

Fabric Defects and Remedies. Lubricating points, intervals between lubricating operations in a loom, doobby, jacquard and drop box.

Weaving preparatory process flow from yarn to fabric for hand & power loom. Type of sizes of yarn packages. Warp winding, pirn winding, warping, sizzling of beaming principles. Warping packs of functions, creating system, drive system, different between direct & section warping, beaming mechanism, maintenance, schedule machine related technical data.

Sizing & Beaming machine. Parts & functions types of machines. Types of speed creel chaining mechanism preparation of size according to yarn drawing in of denting.

Fabric structure and yarn cloth calculations

Fabric Structure-knowledge of Design. Draft, Lifting & plan. Counts of Design repetition and making of following weaves :-

Plain, Twill, point Twill, warp and Weft Stains, and Stains checks, ordinary Honey Comb. Huck-a-back. Mock Leno, Extra warp and Extra weft figuring. Shade effects for figures.

Jacquard designing: - Enlarging figure to suit the reed and picks per inch in the cloth transferring it on to a design paper ready for card cutting.

Calculations speeds, sizes of pulleys and wheels, counts of cotton yarn (British or current system), counts conversion for man made fibres worsted and silk. Heald and Reed calculations, weight warp, weft, weft and size.

Working on preparatory machines. Used in Handloom and powerloom industries

PRACTICAL - II - Weaving

Weaving: - On handloom and power loom, cloth analysis and making point paper signs for jacquards. Jacquard card cutting and lacing practice, making size fixing of the different.

Hand & Power loom objective. Parts & Functions gearing diagram. Tappet changing of fitting various machines. Loom drive crank shafts, bottom shafts, bottom shaps & Auxiliary shaft diagram.

Dobby & jacquard drop box objectives parts & functions. Weaving of different hand & power loom cloth. Practice of weaving on dobby, drop-box & jacquard loom.

Analysis of plain, will satin of different weaves of cloth. Preparation of design according to design. Card cutting of lacing practice.

LIST OF TOOLS AND EQUIPMENTS:-

Sr.No.	NAME AND DISCRIPTION OF TOOLS	FOR REQUIRED
1.	Handloom plane	1 no.
2.	Handloom Dobby	1 no.
3.	Handloom Drop – Box	1 set.
4.	Plain power loom with else Reed mechanism and over pick R. S. 48” -	1 no

REFERENCE BOOKS AUDIO VIDIO CASSETS, TRANSPARENCIES FILMS etc.

Sr. No.	Name of the book	Name of the Author
1.	Handloom Mechanism	---
2.	Weaving Mechanism	K.T. Aswani
3.	Weaving Mechanism	Ajgaonkar
