

## SEMESTER – I (Six months)

### Content:

Week no.	PRACTICAL	THEROY
	<b>Basic course on Bamboo</b>	
1-2	<b>History of Bamboo</b> <ul style="list-style-type: none"> <li>Demonstration of different bamboo item, its modern utilization by showing visual aids. Use of tools safety and workshop safety.</li> <li>Demonstration through field visit and Nursery Practice</li> </ul>	<ul style="list-style-type: none"> <li>History of Bamboo utilization, day-to-day use of bamboo and modern application of bamboo. Types of Bamboo: Future prospects of bamboo technology. General Workshop safety &amp; Tools safety.</li> <li>Basics of Bamboo cultivation, type of propagation and practice in India and abroad,. Selection of bamboo to make various bamboo products.</li> </ul>
3	<b>Preservation of Bamboo</b> <ul style="list-style-type: none"> <li>Use of Borax &amp; Boric Acid, use of Smoke chamber and other Chemical Process. Practice of Traditional process</li> <li>Practice of dying utilizing various chemical &amp; vegetative dyes.</li> </ul>	<ul style="list-style-type: none"> <li>Various techniques of Preservation &amp; Treatment of Bamboo(Through ancient/traditional and modern methods)</li> <li>Colouring/Dying of Bamboo strips/slivers</li> </ul>
4	<b>Introduction of Tools</b> <ul style="list-style-type: none"> <li>Operate and practice of hand tools. It's maintenance and precaution. Practice of measurement of all systems. Hand sawing, Drilling, Skinning, Filling practice.</li> <li>Practice of hand-sawing. Drilling, Skinning, filling practice etc.</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of various hand tools and machine tools used on Bamboo technology, measuring tools. Conversion table etc.</li> <li>Brief description of Hand tools and Machine tools. Specification of tools and types of tools.</li> </ul>
5	<b>Joints</b> <ul style="list-style-type: none"> <li>Practice in tongue and groove or male andfemale joint, Bolt fastening joint. Overlapping joint, U-shape joint. Horizontal joint, Vertical joint etc.</li> </ul>	<ul style="list-style-type: none"> <li>Joints: Briefing about various joints,method of joints, uses of joints.</li> </ul>
6	<ul style="list-style-type: none"> <li>Use of Blow lamp Practice of pattern making, use of blow lamp and it precaution.</li> </ul>	<ul style="list-style-type: none"> <li>How to make pattern, banding, buffing,and polishing of bamboo.</li> </ul>

7	<b>Bamboo processing Machine</b> <ul style="list-style-type: none"> <li>Practice on different machineries used to make various primary bamboo products</li> <li>Practice of Cross Cutting machine, oiling and lubrication of machine</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Bamboo Primary processing Machineries and its uses</li> <li>Brief description of cross cutting machine and how to operate, trouble shooting of this machines</li> </ul>
8	<b>Splitting Machine</b> <ul style="list-style-type: none"> <li>Practice of operation in Radial splitting,. Machine Automatic splitting Machine, oiling and lubrication of machine</li> <li>Practice of operation in knot removing machine. Oiling</li> </ul>	<ul style="list-style-type: none"> <li>Brief description of Radial Splitting machine, Automatic Splitter Machine and how to operate, trouble shooting of this machines</li> <li>Brief description of knot removing machine and how to operate, trouble shooting of the machine</li> </ul>
9	<b>Polishing Machine</b> <ul style="list-style-type: none"> <li>Practice of operation in polishing machine, oiling and lubrication of machine</li> <li>Practice of operation in manual slivering machine, oiling and lubrication of machine</li> <li>Practice of operation in round stick machine oiling and lubrication of machine</li> </ul>	<ul style="list-style-type: none"> <li>Brief description of polishing machine and how to operate, trouble shooting of the machine</li> <li>Brief description of manual slivering machine and how to operate, trouble shooting of the machine.</li> <li>Brief description of Round stick making machine and how to operate trouble shooting of this machine</li> </ul>
10	<b>Drill Machine</b> <ul style="list-style-type: none"> <li>Practice of operation in electric drill machine, oiling and lubrication of machine</li> <li>Practice of operation in 2 side/4 side machine planer, oiling and lubrication of machine including preventive maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Brief description of electric Drill Machine and how to operate trouble shooting of this machines</li> <li>Brief description of 2 side/4 side planer machine and how to operate trouble shooting of this machine`</li> </ul>
11	<b>Pressure Machine</b> <ul style="list-style-type: none"> <li>Practice on Hydraulic Press Machine</li> <li>Practice on Resign Applicator machine</li> </ul>	<ul style="list-style-type: none"> <li>Brief description of Hydraulic Press Machine and its operation &amp; maintenance and also trouble shooting of this machines</li> <li>Brief description of Resign Applicator and Its operation &amp; maintenance and also trouble shooting of this machines</li> </ul>

12	<b>Glue Mixing and Weaving Machine</b> <ul style="list-style-type: none"> <li>Practice on Glue Mixing machine and D D Saw machine</li> <li>Practice on weaving Machine</li> </ul>	<ul style="list-style-type: none"> <li>Brief description of Glue Mixing Machine, DD Saw machine. How to operate and maintenance these machine</li> <li>Operation and maintenance of Automatic Weaving machine</li> </ul>
13	<b>Maintenance of Machine</b> <ul style="list-style-type: none"> <li>Cleaning of machine. Lubrication and oiling of machine and trouble shooting.</li> </ul>	<ul style="list-style-type: none"> <li>What precaution should be observed in operating bamboo processing machine and proper maintenance of machine</li> </ul>
14	<b>Types of Furniture</b> <ul style="list-style-type: none"> <li>Demo of various type of furniture, Draw the Neat sketch of furniture</li> </ul>	<ul style="list-style-type: none"> <li>Introduction: Use of various Household and Public furniture, Advantage of sketch making of various furniture designs.</li> </ul>
15	<b>Materials of Furniture</b> <ul style="list-style-type: none"> <li>Demonstration of different material used in Furniture making</li> </ul>	<ul style="list-style-type: none"> <li>Use of Jigs&amp; fixture.</li> <li>Bamboo, Cane, Wood, Nail, Adhesive, Binding wire, Plastic Rope, Nut-bolt etc.</li> </ul>
16-21	<ul style="list-style-type: none"> <li>Techniques and Furniture making</li> <li>Practice of furniture making 6- weeks               <ol style="list-style-type: none"> <li>Sofa set</li> <li>Chair</li> <li>Table</li> <li>Bed</li> <li>Beach &amp; Garden</li> <li>Dining chair</li> <li>Wall Chair</li> <li>Swing</li> <li>Relaxing Chair</li> <li>Centre Table</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Various joineries used in furniture making process</li> </ul>
22-23	Project work – Industrial visit	
24-25	Revision	
26	Examination	

## SEMESTER-II

### Content:

Week No	PRACTICAL	THEORY
1-2	<b>Selection of Bamboo Variety</b> <ul style="list-style-type: none"> <li>• Identification of bamboo as per job requirement at practical field.</li> </ul>	<ul style="list-style-type: none"> <li>• Various bamboo species and their utilization ,</li> <li>• Selection of bamboo as per job specification.</li> </ul>
3	<b>Designing</b> <ul style="list-style-type: none"> <li>• Practice on free hand drawing</li> <li>• Practice on Drawing of various gift items, stationery Item</li> </ul>	<ul style="list-style-type: none"> <li>• What is Design?</li> <li>• Free hand drawing of various items</li> </ul>
4	<b>Basics of Computer</b> <ul style="list-style-type: none"> <li>• Booting the Computer, Opening Windows, menus, using the mouse, create a directory in Windows, create a directory, create a File and Folder, use my documents, use start menu for opening an application, change control panel settings for display, Familiarize with Key Board and Keys.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to computer fundamentals and its parts,</li> <li>• Familiarizing with Drives, Booting of a Computer system, Using the mouse, right click, left click and use of operating systems like Windows OS, menu system, Tool bars,.</li> </ul>
5	<b>Word Processing</b> <ul style="list-style-type: none"> <li>• Practice on MS Word</li> <li>• Practice on Internet</li> </ul>	<ul style="list-style-type: none"> <li>• Use of word processing software</li> <li>• Use of Internet</li> </ul>
6-7	<b>AutoCAD</b> <ul style="list-style-type: none"> <li>• Menu bar</li> <li>• AutoCAD pull down menu</li> <li>• Standard Toolbar</li> <li>• User Coordinate System Icon</li> <li>• Command Line</li> <li>• Command windows</li> </ul>	<ul style="list-style-type: none"> <li>• What is AutoCAD &amp; its purpose</li> </ul>
8	<ul style="list-style-type: none"> <li>• Design practice on AutoCAD</li> <li>• Practice on Drawing of various gift items, stationery Item</li> </ul>	<ul style="list-style-type: none"> <li>• Design intervention on new innovative products.</li> <li>• Different aspects of drawing</li> </ul>

9-10	<b>Gift items and Jewelry</b> <ul style="list-style-type: none"> <li>• How to make a design of Gift item, &amp; bamboo jewelries/ornaments</li> <li>• Making of Bamboo bags</li> <li>• Making some products like tea coaster, bamboobags etc in workshop with the help of machines and hand tools.</li> </ul>	<ul style="list-style-type: none"> <li>• Practice of bamboo ornaments and various gift items</li> <li>• Designing of various Handicraft items</li> <li>• Identification of suitable products as per market demand like tea coaster, bamboo bags, placemat etc.</li> <li>• Make a process lay-out of all individual products</li> </ul>
11	<ul style="list-style-type: none"> <li>• Making of Bamboo Models</li> <li>• Practice of making model and mock</li> </ul>	<ul style="list-style-type: none"> <li>• How to make model &amp; mock up</li> <li>• Selection of Marketable Product</li> </ul>
12-13	<ul style="list-style-type: none"> <li>• Making of Bamboo Mats and Blinds</li> <li>• Making of Bamboo Mats by using weaving Machine and Manually</li> <li>• Making of Bamboo Blinds</li> </ul>	<ul style="list-style-type: none"> <li>• Process of Weaving Bamboo Mats,</li> <li>• Process of making Bamboo Blinds</li> <li>• Different patterns of Mat and Blind</li> </ul>
14	<b>Maintenance of Machines</b> <ul style="list-style-type: none"> <li>• All bamboo pieces and powder is removed from Working points, using supplied tools and equipment, to meet manufacturer's specifications.</li> <li>• Parts are lubricated according to manufacturer's specifications using the recommended lubricants.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean and lubricate of</li> <li>• automatic weaving machine,</li> <li>• manual press machine,</li> <li>• industrial sewing machine &amp; other portable tools.</li> </ul>
15-16	<b>Jigs and Fixtures</b> <ul style="list-style-type: none"> <li>• Make various jig &amp; fixtures as per requirement and make different products.</li> <li>• Make various molds for making molded Products.</li> </ul>	<ul style="list-style-type: none"> <li>• What are jig and fixtures?</li> <li>• What are the advantages of Jig &amp; fixtures? When we use Jig &amp; Fixtures?</li> <li>• What are the materials using to make jig &amp; fixtures?</li> </ul>
17-18	<b>Finishing Technique</b> <ul style="list-style-type: none"> <li>• Final touch on the products using finishing</li> <li>• materials</li> </ul>	<ul style="list-style-type: none"> <li>• Various methods of finishing techniques,</li> <li>• Various finishing materials &amp; there uses.</li> </ul>
19	<b>Quality Concern</b> <ul style="list-style-type: none"> <li>• Random samples are taken according to Company sampling procedures.</li> <li>• Samples are measured for specified parameters according to company technical specifications.</li> </ul>	<ul style="list-style-type: none"> <li>• What is Quality concerns</li> <li>• Sample and assess Bamboo production according to company technical specifications.</li> <li>• Range: parameters to be specified.</li> </ul>

20	<ul style="list-style-type: none"> <li>• Packaging and Storing</li> <li>• Practice on packaging&amp; storing.</li> </ul>	<ul style="list-style-type: none"> <li>• Concept of Quality assurance. Method of proper packaging of finished products &amp; proper storing.</li> </ul>
21	<ul style="list-style-type: none"> <li>• Transportation and Delivery</li> <li>• Survey the Bamboo market.</li> <li>• Arrange the Transport service.</li> <li>• Delivery of finished product</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of transportation &amp; marketing. Concept of sales services.</li> <li>• Calculation of cost of finished Bamboo.</li> </ul>
22-23	<b>Project Work</b> <ul style="list-style-type: none"> <li>• Visit to various shop and exhibition</li> <li>• Market survey in some cities</li> <li>• participating at various Exhibition, Seminar, Trade fair etc.</li> </ul>	<ul style="list-style-type: none"> <li>• How to behave with customer as entrepreneur</li> <li>• Communication skills that are useful to customer service are identify in accordance with enterprises requirements.(speaking, giving information, active listening)</li> </ul>
24-25	Revision	
26	Examination	