

CURRICULUM

F

O

R

Bamboo Handicraft Maker

(A Competency Based Short-term Curriculum)



Council for Technical Education and Vocational Training
Curriculum Development Division

Sanothimi, Bhaktapur
2008

Table of Contents

Introduction	3
Aim	3
Objectives.....	3
Course Description	3
Duration	3
Target Group.....	4
Target location	4
Group Size	4
Medium of Instruction.....	4
Pattern of Attendance	4
Focus of Curriculum	4
Entry Criteria.....	4
Instructional Media and Materials	4
Teaching Learning Methodologies	4
Follow up Provision	4
Grading System.....	5
Trainees Evaluation Details	5
Trainers' Qualification (Minimum)	5
Trainer-Trainees Ratio	5
Suggestions for Instruction	5
Certificate Requirements	6
Skill Testing Provision.....	6
Physical Facilities	6
Course Structure of Bamboo Handicraft Maker (Artisan)	8
Fundamental tools and Works.....	9
Preparation of Component Parts	23
Bamboo Stem Based Handicrafts	36
Bamboo Root Based Handicrafts.....	68
Finishing Works Costing	79
Common Module	85
Reference Books:	101

Introduction

The competency based and market oriented curriculum for **Bamboo Handicraft Maker (Artisan)** is designed to produce employable skilled Handicraft Technician equipped with knowledge, skills and attitudes related to the occupation. In this curriculum, the trainees will practice skills of handicraft making; especially the bamboo based handicrafts in the bamboo handicraft industries. Once the trainees acquire the competencies they will have ample opportunity for employment and self-employment through which they will contribute in the national streamline of poverty reduction in the country. The skills and knowledge included in this curriculum improve their knowledge and skills and make them competent bamboo handicraft maker needed for the occupation.

The main feature of the curriculum is to incorporate the drop-out youths who have only the class five schooling experience. The curriculum is designed on the basis of modular modality so that it will be successful to meet the needs of individual and community.

Aim

The main aim of this program is to produce employable bamboo based handicraft maker who could provide effective services at bamboo based handicraft industries as well as could create self employment opportunity in the country.

Objectives

After completion of training the trainees will be able:

1. To familiarize with concept of bamboo and bamboo based handicraft
2. To prepare carving and embroidery patterns
3. To prepare the splints frames, lipping stripes, roofs, and bases as parts related to decorative articles
4. To design and make bamboo stem based handicrafts (decorative articles)
5. To design and make bamboo root based handicrafts (decorative articles)
6. To perform finishing works of the products
7. To apply simple mathematical technique related occupation
8. To be familiar with First Aid and HIV/AIDS
9. To be familiar with occupational health and apply safe working technique
10. To apply Communication and Small Enterprise Development skills

Course Description

This curricular programme is designed based on the work required to be performed by a Bamboo Based Handicraft Maker at handicraft industries in Nepal. Therefore, this curriculum is designed into modules system to provide equip trainees with the knowledge & skills of the field of bamboo based handicraft especially, with knowledge and skills of decorative article making.

This course intends to provide knowledge and skills focusing on Introduction, Fundamental tools and work, Preparation of component parts, Bamboo stem based handicraft making, Bamboo root based handicraft making and Finishing & costing of the handicraft products.

It also includes Applied mathematics, Occupational health and safety, First aid, HIV/AIDS, Communication and Small Enterprise Development as sub modules under common module with the view to impart fundamental skills for livelihood.

There will be demonstration by instructors/trainers and the opportunity to practice skills/tasks necessary for this level of technicians. Trainees will practice & learn skills using typical tools, equipment, machines, and materials necessary for the program

Duration

The total duration of the course extends 460 hours

Target Group

The target group for this training program will be all interested individuals with educational prerequisite of minimum class five pass. Preference will be given to the individuals of rural, poor, female, Dalit, Janjati, Disadvantaged Groups (DAGs) and conflict affected people.

Target location

The target group for this training program will be from all over Nepal.

Group Size

The group size of this training program will be maximum 20, provided all necessary resources to practice the tasks/ competencies as specified in this curriculum guide.

Medium of Instruction

The medium of instruction for this program will be Nepali/English or both.

Pattern of Attendance

The trainees should have 80% attendance in theory classes and 90% in practical/ performance to be eligible for internal assessments and final examinations.

Focus of Curriculum

This is a competency-based curriculum. This curriculum emphasizes on competency performance. 80% Time is allotted for performance and 20% Time is for related technical knowledge. So, the curriculum focuses on performance of the specified competencies. The provision of OJT is made to practice the critical tasks during the stated period.

Entry Criteria

Individuals who meet the following criteria will be allowed to enter this curricular program:

- Minimum of five class pass
- Minimum of 15 years of age
- Physically and mentally fit
- Should pass entrance examination
- Preference will be given to the individuals of rural, poor, female, Dalit, Janjati, Disadvantaged Groups (DAGs) and conflict affected people.

Instructional Media and Materials

The following instructional media and materials are suggested for the effective instruction and demonstration.

- **Printed Media Materials** (Assignment sheets, Case studies, Handouts, Information sheets, Individual training packets, Procedure sheets, Performance Check lists, Textbooks etc.).
- **Non-projected Media Materials** (Display, Models, Flip chart, Poster, Writing board etc.).
- **Projected Media Materials** (Opaque projections, Overhead transparencies, Slides etc.).
- **Audio-Visual Materials** (Audiotapes, Films, Slide-tape programs, Videodiscs, Videotapes etc.).
- **Computer-Based Instructional Materials** (Computer-based training, Interactive video etc.).

Teaching Learning Methodologies

The methods of teaching for **Bamboo Artisan** program will be a combination of several approaches. Such as Illustrated Lecture, Group Discussion, Demonstration, Simulation, Guided practice, Practical experiences, Fieldwork and Other Independent learning.

- Theory: Lecture, Discussion, Assignment, Group work.
- Practical: Demonstration, Observation, Guided practice and Self-practice.

Follow up Provision

First follow up: Six months after the completion of the program

Second follow up: Six months after the completion of the first follow up

Follow up cycle: In a cycle of one year after the completion of the second follow up for five years

Grading System

The trainees will be graded as follows based on the marks in percentage secured by them in tests/ evaluations.

- Distinction: Passed with 80% or above
- First Division: passed with 75% or above
- Second Division: passed with 65% or above
- Third Division: passed with 60% or above

Trainees Evaluation Details

- Continuous evaluation of the trainees' performance is to be done by the related instructor/ trainer to ensure the proficiency over each competency under each area of sub-module.
- Related technical knowledge learnt by trainees will be evaluated through written or oral tests as per the nature in the institutional phase of training.
- Trainees must secure minimum marks of 40% and 60% in theory and practical evaluations respectively.
- The ratio between internal and final examination of knowledge test will be 20:80 but for the performance test it will just reverse.
- The entrance test will be administered by the concerned training institute
- The OJT will be evaluated according to the OJT details stated in the curriculum

Trainers' Qualification (Minimum)

- TSLC in related field
- Good communicative and instructional skills
- Experience in related field

Trainer-Trainees Ratio

- In theory classes 1(trainer): 20 (trainees)
- In practical classes (in workshop and laboratory) 1(trainer): 10 (trainees)

Suggestions for Instruction

1. Select objectives

- Write objectives of cognitive domain.
- Write objectives of psychomotor domain.
- Write objectives of affective domain

2. Select Subject matter

- Study subject matter in detail.
- Select content related to cognitive domain.
- Select content related to psychomotor domain.
- Select content related to affective domain.

3. Select Instructional Methods

- Teacher centered methods: like lecture, demonstration, question –answers, inquiry, induction and deduction methods.
- Student initiated methods like experimental, field trip/excursion, discovery, exploration, problem solving, and survey methods.
- Interaction methods like discussion, group/team teaching, microteaching and exhibition.
- Dramatic methods like role play and dramatization

4. Select Instructional method (s) on the basis of objectives of lesson plans and KAS domains.

5. Select appropriate educational materials and apply at right time and right place.

6. Evaluate the trainees applying various tools to correspond the KAS domains.

7. Make plans for classroom / field work / workshop organization and management.

8. Coordinate among objectives, subject matter and instructional methods.

9. Prepare lesson plan for theory and practical classes.
10. Deliver /conduct instruction / program.
11. Evaluate instruction/ program.

Special suggestion for the performance evaluation of the trainees

1. Perform task analysis.
2. Develop a detail task performance checklist.
3. Perform continuous evaluation of the trainees by applying the performance checklist.

Suggestion for skill training

1. Demonstrate task performance in normal speed.
2. Demonstrate slowly with verbal description of each and every Performance steps in the sequence of activity of the task performance using question and answer techniques.
3. Repeat 2 for the clarification on trainees demand if necessary.
4. Perform fast demonstration of the task.

Provide trainees the opportunities to practice the task performance demonstration

1. Provide opportunity to trainees to have guided practice.
2. Create environment for practicing the demonstrated task performance.
3. Guide the trainees in each and every Performance steps of task performance.
4. Provide trainees to repeat and re-repeat as per the need to be proficient on the given task performance.
5. Switch to another task demonstration if and only trainees developed proficiency in the task performance.

Other suggestions

1. Apply principles of skill training.
2. Allocate 20% Time for theory classes and 80% Time for task performance while delivering instructions.
3. Apply principles of learning relevant to the age group of the learners.
4. Apply principles of intrinsic motivation.
5. Facilitate maximum trainees' involvement in learning and task performance activities.
6. Instruct the trainees on the basis of their existing level of knowledge, skills and attitude.

Certificate Requirements

The related training institute will provide the certificate of "**Bamboo Handicraft Maker**" to those trainees who successfully complete all the requirements as prescribed by the curriculum.

Skill Testing Provision

The graduates who have the completion certificate of "**Bamboo Handicraft Maker**" may sit in the skill test examination of **Level one (Level- 1)** as provisioned and administered by the National Skill Testing Board.

Physical Facilities

The theory class rooms at least should have area of 10 square feet per trainee and in the workshop it should be at least of 30 square feet per trainees. All the rooms and laboratory should be well illuminated and ventilated.

<i>Well equipped workshop with adequate space</i>	<i>1 (No.)</i>
<i>Well furnished class room with adequate space</i>	<i>1 (No.)</i>
<i>Office room equipped with modern facilities</i>	<i>1 (No.)</i>
<i>Principle room equipped with modern facilities</i>	<i>1 (No.)</i>
<i>Reception room equipped with modern facilities</i>	<i>1 (No.)</i>

List of tools, equipment and materials:

Measuring tape, Knives, Scissor, Scratching brush, Hand saw, Working board, Plash, Vice, Khukuri, C-clamp, Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try- square, Metal ruler, Scratch awl, Hack saw, File, Drilling machine, Drill bit, Circular machine, Small grinder, Rasp, Blow- lamp, Cotton cloth Chisel -Round chisel , Plane chisel , File – Wooden file, Steel file, Hand saw, Hammer, Scraper, Compressor machine, Spray machine for painting, Reamer, Drill Machine with cutter bit, Electric mini power saw, Leather pad, Glove, Sharpening stone, Compressor machine, Electric mini power saw, Spray machine, Carving chisel, Embroidery making tool sets, hardware, Sand paper, ply paper, Varnish, Thinner, Linseed oil etc

Course Structure of Bamboo Handicraft Maker (Artisan)

Part A. Specialized modules:

S. N.	Modules	Nature	Time (hours)	Full marks
3	Fundamental Tools and Works	T+P	30	25
4	Preparation of Component Parts	T+P	60	50
4	Bamboo Stem Based Handicraft	T+P	140	100
5	Bamboo Root Based Handicraft	T+P	130	100
6	Finishing Works Costing	T+P	30	25
	Total		390	300

Part B. Common module

S.N.	Sub-modules	Nature	Time (hrs)	Full marks
1	Applied Mathematics	T+P	20	50
2	Occupational Health & Safety	T+P	10	
3	First Aid	T+P	5	
4	HIV/AIDS	T+P	5	
6	Communication	T+P	10	
5	Small Enterprise Development	T+P	20	
	Total		70	50
	Grand total (Part A &B)		460	350

Module: M1

Fundamental tools and Works

Description

This module intends to provide the knowledge and skills on introduction, fundamental tools handling techniques and fundamental works related to bamboo based handicrafts making such as concept of bamboo, safety rules, measuring, marking, sawing, trimming, drilling, skinning, and preparations of pins, boarders, splints, joints and frames related to the occupation.

Objectives:

After completion of this module the trainees will be able:

1. To familiarize with concept of bamboo and bamboo based handicrafts.
2. To handle different tools
3. To carryout fundamental works related to bamboo handicrafts

Tasks:

1. Explain bamboo handicraft
2. Follow safety rules
3. Identify/enumerate/handle tools and equipment
4. Measure/ mark work piece
5. Saw/trim/slice /file work piece.
6. Drill/bore hole
7. Skin work piece
8. Apply blowtorch
9. Split stripes
10. Dry stripes
11. Straighten/bend/fold component piece
12. Make butt joint/lap joint/ mitre joint

Module Structure (M1)

S.N.	Code	Modules	Nature	Total hours	Full marks
1	M1	Fundamental Tools and Works	T+P	30	25
Total				30	25

Task Analysis

TASK NO.1 Explain the concept of bamboo based handicrafts/decorative articles.

Time: 2 hrs
Theory: 2 hrs
Practical: hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions 2. Define bamboo 3. Enlist characteristic of good bamboo 4. Detect the defects of bamboo 5. Define handicraft 6. Enlist the category of handicraft 7. Enlist the importance of bamboo based handicraft 8. Enlist the development concept of handicraft. 9. Enlist the potentiality of bamboo based handicraft in Nepal 	<p><u>Condition(Given):</u> Class room, textbooks, manuals and handouts</p> <p><u>Task (What):</u> Explain concept of bamboo based handicrafts/decorative articles</p> <p><u>Standard (How well):</u> The concept of bamboo and bamboo based handicrafts well explained.</p>	<ul style="list-style-type: none"> ➤ Definition of handicraft ➤ Category of handicrafts ➤ Historical background of handicraft development ➤ Importance of bamboo based handicrafts ➤ Bamboo based decorative articles (stem based & root based) ➤ Potentiality of bamboo based handicraft in Nepal ➤ Definition of bamboo ➤ Characteristic of a good bamboo ➤ Defects in bamboo ➤ Method of cutting upstanding bamboo

Tools/equipment:

Safety:

Task Analysis

TASK NO. 2 Follow safety rules.

Time: 2 hrs
Theory: 2 hrs
Practical: hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1 Select personal protective equipment (PPE) as required 2 Wear required safety devices 3 Inspect and maintain safe work area 4 Follow established procedures for the use and care of tools 5 Follow established procedures for the use and care of equipments 6 Follow established procedures for the use and care of power operated equipment 7 Follow established procedures for the use and care of safety equipments 8 Enlist safety signs/notice. 9 Enlist preparation for emergency response. 10 Identify basic first-aid procedures 11 Lift objects and materials in accordance with established procedures 	<p><u>Condition (Given):</u> Class room OHP, transparency, white board and marker, handouts and safety poster</p> <p><u>Task (What):</u> Orient with safety rues. Follow safety measures.</p> <p><u>Standard (How well):</u> Safety rules and regulation oriented. Safety measures followed in sequential order.</p>	<ul style="list-style-type: none"> ➤ Definition of safety ➤ Safety rules and regulations ➤ Importance of safety ➤ Importance of occupational safety ➤ Workshop hazards ➤ Personal and workshop safety rules and regulations ➤ Safety sign and notice ➤ Emergency response ➤ First Aid

Tools/equipment:

Safety:

Task Analysis

TASK NO. 3 Identify/enumerate/handle tools and equipment.

Time: 3 hrs
Theory: 1 hr
Practical: 2 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Identify the tools used in bamboo based handicraft 3. Identify the equipments used in bamboo based handicraft. 4. Enlist function of tools and 5. Equipment. 6. Handle measuring and marking tools. 7. Handle cutting, sawing and filling tools. 8. Handle drilling/boring tools. 9. Handle blow torch. 10. Handle carving/embroidery making tools 11. Handle clamping tools. 	<p><u>Condition (Given):</u> Workshop and displayed tools</p> <p><u>Task (What):</u> Identify/enumerate/handle tools and equipment.</p> <p><u>Standard (How well):</u> Various tools and equipments well identified, enumerated and handled.</p>	<ul style="list-style-type: none"> ➤ Identifications of tools and equipments. ➤ Function of different tools and equipment ➤ Tools handling technique ➤ Safety precautions

Tools/equipment: Various displaying tools and equipment

Safety: Handle cutting tools in safe manner

Task Analysis

TASK NO. 4 Measure/mark work piece.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Define measurement 3. Enlist importance of measuring techniques 4. Enlist importance of marking 5. Obtain work piece 6. Collect measuring tools 7. Collect marking tools 8. Apply measuring tools to measure work piece in required size 9. Apply marking tools to mark work piece in required size & shape. 10. Clean and remove dust and particles object. 11. Restore all tools. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Measure and mark work piece</p> <p><u>Standard (How well):</u> Work piece measured and marked applying measuring and marking tools.</p>	<ul style="list-style-type: none"> ➤ Definition of measurement ➤ Importance of marking work piece ➤ Measuring techniques ➤ Marking technique

Tools/equipment: Measuring tape, scale, try-square, pencil, marker, dot pen.

Safety:

Task Analysis

TASK NO. 5 Saw/trim/slice /file work piece.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipment. 3. Obtained work piece 4. Observe marked work piece 5. Saw work piece in required size & shape. 6. Trim work piece in required size 7. Slice work piece required size. 8. File work piece as per standard. 9. File work piece as required. 10. Clean and remove dust and particles object. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Saw/trim/slice/ file work piece.</p> <p><u>Standard (How well):</u> Work piece sawed, trimmed, sliced and filed as per specification.</p>	<ul style="list-style-type: none"> ➤ Importance of sawing, trimming, slicing and filing in handicraft area. ➤ Sawing techniques ➤ Trimming and slicing techniques ➤ Filing techniques

Tools/equipment: Khukhuri, knives, chisel, file etc

Safety: Handle cutting tools in safe manner

Task Analysis

TASK NO. 6 Perform nailing.

Time: 1.5 hrs

Theory: 0.5 hr

Practical: 1 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect necessary tools, equipment and materials. 3. Obtain finished work piece. 4. Mark layout line on the work piece. 5. Select appropriate nail as per material. 6. Hold the work piece. 7. Hammering on nail 8. Clean the work pieces it. 9. Measure the dimension of work pieces according to the drawing. 10. Restore tools and materials. 11. Keep records. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipment and materials</p> <p><u>Task (What):</u> Perform nailing Handle hammer</p> <p><u>Standard (How well):</u> Nailing on work piece performed. Hammer handled.</p>	<ul style="list-style-type: none"> ➤ Importance of nailing and its function ➤ Size of nail ➤ Procedure of nailing ➤ Safety precautions

Tools/equipment: Nail, Hammer, Steel rule

Safety:

- Hold the work piece perfectly.
- Use safety Gloves.
- Follow general safety rules.

Task Analysis

TASK NO. 7 Drill/bore hole

Time: 1.5 hrs

Theory: 0.5 hr

Practical: 1 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipment. 3. Obtain work piece. 4. Observe work piece. 5. Fix work piece 6. Mark the point to be drilled. 7. Drill hole. 8. Clean and remove dust and particles object. 9. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Drill/bore hole</p> <p><u>Standard (How well):</u> Various sizes of holes bored and drilled as per requirements.</p>	<ul style="list-style-type: none"> ➤ Uses of drill machine ➤ Drilling and boring ➤ Procedure ➤ Safety precaution

Tools/equipment: Drill machine, bit etc

Safety: Handle cutting tools safely

Task Analysis

TASK NO. 8 Skin work piece.

Time: 1.5 hrs
Theory: 0.5 hr
Practical: 1 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Enlist importance of skinning 3. Obtain work piece 4. Collect required tools 5. Determine the point to be skinned. 6. Skin the work piece. 7. Clean and remove dust and particles object. 8. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Skin work piece</p> <p><u>Standard (How well):</u> Work piece skinned as per requirements and established standard.</p>	<ul style="list-style-type: none"> ➤ Importance of skinning ➤ Requiring tools ➤ Skinning techniques ➤ Safety precaution

Tools/equipment: knives, khukuri, chisel etc

Safety: Handle cutting tools safely

Task Analysis

TASK NO. 9 Apply blow-torch.

Time: 1.5 hrs
Theory: 0.5 hr
Practical: 1 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect blowtorch 3. Enlist importance of blow-torch 4. Obtain work piece 5. Collect materials 6. Collect blow-lamp 7. Apply blow-torch on work piece. 	<p><u>Condition (Given):</u> Workshop, blow-torch and materials</p> <p><u>Task (What):</u> Apply blow - torch</p> <p><u>Standard (How well):</u> Blow – torch well applied.</p>	<ul style="list-style-type: none"> ➤ Importance of blow torch ➤ Applying techniques ➤ Safety precaution

Tools/equipment: blow –torch, lighter, cloth etc

Safety: Handle blow-torch safely

Task Analysis

TASK NO. 10 Split stripes.

Time: 2.5 hrs
Theory: 0.5 hr
Practical: 2 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipments 3. Obtain work piece 4. Collect required tools and equipments 5. Receive measurement of required 6. Split strip 7. Split cut piece in required stripes. 8. Clean and remove dust and particles object. 9. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Split stripe</p> <p><u>Standard (How well):</u> Stripe split as per standard.</p>	<ul style="list-style-type: none"> ➤ Measuring of required split strip ➤ Splitting techniques ➤ Safety precaution

Tools/equipment: Knives, khukuri etc

Safety: Handle tools safely

Task Analysis

TASK NO. 11 Dry stripes.

Time: 1.5 hrs
Theory: 0.5 hr
Practical: 1 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
1. Receive instructions. 2. Enlist the importance of drying 4. Receive the drying techniques 5. Obtain work piece 6. Keep drying process under sunlight.	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Dry stripes.</p> <p><u>Standard (How well):</u> Stripes dried as per standard.</p>	<ul style="list-style-type: none"> ➤ Importance of drying ➤ Drying techniques ➤ Safety precaution

Tools/equipment:

Safety: Handle tools safely

Task Analysis

TASK NO. 12 Straighten/bend/fold component piece.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions 2. Collect tools and equipment 3. Enlist the importance of straightening/ bending/ folding component piece 4. Collect component piece 5. Apply blow –torch on required portion of the component piece 6. Clamp work piece on vice 7. Straighten work piece as required. 8. Bend work piece as required size 9. Fold work piece as required size 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Straighten/bend/fold component piece</p> <p><u>Standard (How well):</u> Component piece straightened/bended and folded.</p>	<ul style="list-style-type: none"> ➤ Importance of straightening, bending and folding of component piece ➤ Straightening techniques ➤ Bending techniques ➤ Folding techniques ➤ Safety precaution

Tools/equipment: c-clamp, blow torch and vice.

Safety: Handle tools safely

Task Analysis

TASK NO. 13 Make butt joint/lap joint /mitre joint

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect required tools and equipments 3. Collect work piece 4. Mark the point to make butt joint 5. Mark the point to make lap joint 6. Mark the point to make mitre joint. 7. Prepare butt joint 8. Prepare lap joint 9. Prepare mitre joint 10. Clean and remove dust and particles object 11. Restore all tools & remaining materials 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Make butt joint/lap joint/ mitre joint</p> <p><u>Standard (How well):</u> Butt joint, lap joint and mitre joint made as per standard and measurement.</p>	<ul style="list-style-type: none"> ➤ Importance of joints ➤ Types of joints ➤ Making techniques ➤ Joint making technique ➤ Safety precaution

Tools/equipment: Hand saw, plash, vice, knives, measuring tape, hammer, chisel, glue etc

Safety: Handle cutting tools safely

Module 2

Preparation of Component Parts

Description:

This module intends to provide knowledge and skills on preparation of materials and preparation of different component parts for making stem based handicraft (decorative articles). It also deals with design and drawing of various decorative articles before making them. According to volume and nature of tasks trainees can work in group and individually.

Objectives:

After completion of this module the trainees will be able:

1. To prepare different type and sizes of splint(choya)
2. To prepare different lipping stripes
3. To prepare design and free hand drawing of different decorative articles
4. To prepare different base and roof parts of the decorative articles

Module Structure (M2)

S.N.	Code	Module	Nature	Total hours	Full marks
1	M2	Preparation of component Parts	T+P	60	50
Total				70	50

Tasks:

1. Prepare pin
2. Prepare thick splint/thin splint/wide splint/bend splint (Choya)
3. Prepare photo frame/basket frame/temple frame/tray frame
4. Prepare lamp/letter box/photo frame lipping stripes (boarders)
5. Apply glue for joining pieces
6. Design bamboo stem based decorative articles
7. Draw sketch/working drawing of decorative articles
8. Design pattern of weaving
9. Weave matte piece in required size & shape
10. Prepare carving/embroidery patterns
11. Make plain/slant/round/pagoda roof
12. Make clock base/flower base/lamp base/temple base

Task Analysis

TASK NO. 1 Prepare pin.

Time: 2 hrs

Theory: 0.5 hr

Practical: 1.5 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipment. 3. Enlist importance of pin. 4. Enlist types of pin. 5. Enlist making techniques. 6. Collect stripe. 7. Measure and mark on stripes. 8. Prepare pins. 9. Clean and remove dust and particles object. 10. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Prepare pin</p> <p><u>Standard (How well):</u> Pin prepared as per standard.</p>	<ul style="list-style-type: none"> ➤ Importance of pin ➤ Types of pin ➤ Making techniques ➤ Safety precaution

Tools/equipment: Hand saw, knives, scale, khukuri, chisel etc

Safety: Handle tools safely

Task Analysis

TASK NO. 2 Prepare thick splint/thin splint/wide splint (Choya).

Time: 4 hrs
Theory: 1 hr
Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect the required tools 3. Collect the required work piece 4. Enlist types of splint (choya) 5. Peel thick splint as required 6. Peel thin splint as required. 7. Peel wide splint as required. 8. Clean and remove dust and particles object. 9. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Prepare thick splint/thin splint/wide splint (choya)</p> <p><u>Standard (How well):</u> Thick splint, thin splint and wide splint prepared as per standard.</p>	<ul style="list-style-type: none"> ➤ Types of splint (choya) ➤ Gauging of thick, thin and wide splint ➤ Preparation techniques ➤ Safety precaution.

Tools/equipment: Hand saw, knives, measuring tape, khukuri, chisels etc

Safety: Handle cutting tools safely

Task Analysis

TASK NO. 3 Prepare photo frame/basket frame/temple frame/tray frame.

Time: 5 hrs

Theory: 1 hr

Practical: 4 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Enlist types of frame. 3. Enlist making techniques 4. Obtain work piece. 5. Collect tools. 6. Measure and mark component piece. 7. Prepare various component pieces for frames. 8. Clean and remove dust and particles object. 9. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Prepare photo frame/basket frame/temple frame/tray frame</p> <p><u>Standard (How well):</u> Photo frame, basket frame, temple frame and tray frame Prepared in required size and numbers</p>	<ul style="list-style-type: none"> ➤ Types of frame ➤ Importance of frame ➤ Uses of frame ➤ Frame making techniques

Tools/equipment: Hand saw, plash, vice, knives, measuring tape, hammer, chisel, file, glue etc

Safety: Handle cutting tools safely

Task Analysis

TASK NO. 4 Prepare lamp/letter box/photo frame lipping stripes (boarders).

Time: 5 hrs

Theory: 1 hr

Practical: 4 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect work piece. 3. Collect tools. 4. Measure and mark work piece. 5. Apply tool for lipping. 6. Prepare lipping strip for lamp 7. Prepare lipping stripes for letter box 8. Prepare lipping stripes for photo frame. 9. Obtain lipping. 10. Clean and remove dust and particles object. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Prepare lamp/letter box/photo frame lipping stripes (boarders)</p> <p><u>Standard (How well):</u> Lipping stripes for lamp, letter box, photo frame (boarders) prepared</p>	<ul style="list-style-type: none"> ➤ Importance of lipping ➤ Types of lipping ➤ Size of lipping stripes ➤ Preparing techniques ➤ Lipping techniques ➤ Safety precaution

Tools/equipment: Hand saw, plash, vice, knives, measuring tape, hammer, chisel, file, glue etc

Safety: Handle cutting tools safely

Task Analysis

TASK NO. 5 Design bamboo stem based decorative articles.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hr

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect necessary instruments and materials. 3. Assume the decorative article to be designed. 4. Conceptualize the whole parts of the decorative articles. 5. Ensure the freehand sketch of the decorative articles to be drawn. 6. Obtain catalogue/model of the object. 7. Design the concept based on obtained catalogue or model of the object 	<p><u>Condition (Given) :</u> Classroom, model of decorative articles necessary materials and catalogue</p> <p><u>Task (What) :</u> Design bamboo stem based decorative articles.</p> <p><u>Standard (How well) :</u> Bamboo stem based decorative articles well designed consulting related catalogues.</p>	<ul style="list-style-type: none"> ➤ Concept of design ➤ Design criteria ➤ Model of different decorative articles ➤ Sketching of different decorative articles ➤ Design techniques

Tools/equipment: Various templates, model of decorative articles and catalogue

Safety:

Task Analysis

TASK NO. 6 Draw sketch/working drawing of decorative articles.

Time: 3 hrs
Theory: 1 hr
Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools, instruments and materials 3. Obtain white paper. 4. Obtain models of decorative articles 5. Draw the freehand sketch of different decorative articles. 6. Refine the freehand sketches and convert to working drawing 7. Insert measurement. 8. Remove dust and particles from drawing. 	<p><u>Condition (Given) :</u> Classroom, drawing model of decorative articles and necessary materials</p> <p><u>Task (What) :</u> Draw sketch/working drawing of decorative articles</p> <p><u>Standard (How well) :</u> Sketch and working drawing of decorative articles drawn consulting related catalogues</p>	<ul style="list-style-type: none"> ➤ Concept of working drawing and sketch in handicraft design ➤ Views of sketch ➤ Dimension and scale ➤ Technique of sketching

Tools/equipments:

Paper, Pencil, Eraser, Dot pen, Marker, Paper cutter, sitting mat, Glue, Scotch tape, Pencil sharpener, Colour pencil, Ruler, Compass, Divider, Cutter, Cotton cloth & cleaning brush

Safety:

Task Analysis

TASK NO. 7 Design pattern of weaving.

Time: 3 hrs
Theory: 1 hr
Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Define weaving pattern. 3. Identify design techniques of pattern 4. Design over one- under one weave. 5. Design over two- under two weave. 6. Design over three- under three weave. 7. Design hexagonal weave. 8. Enlist types of pattern. 9. Design square pattern 10. Design blocking weave. 11. Design check pattern weave. 12. Design pattern of weaving. 	<p><u>Condition (Given) :</u> Workshop, drawing and necessary materials</p> <p><u>Task (What) :</u> Design pattern of weaving.</p> <p><u>Standard (How well) :</u> Various types of weaving patterns designed consulting related catalogues.</p>	<ul style="list-style-type: none"> ➤ Concept of weaving pattern ➤ Types of weaving pattern ➤ Method of weaving pattern ➤ Designing techniques of weaving pattern ➤ Weaving techniques

Tools/Equipments:

Paper, Pencil, Eraser, Dot pen, Marker, Paper cutter, Sitting mat, Glue, Scotch tape, Pencil sharpener, Colour pencil, Ruler, Compass, Divider, Cutter, Cotton cloth & cleaning brush

Safety:

Task Analysis

TASK NO. 8 Weave matte piece in required size & shape.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools and equipment 3. Weave over one- under one weave. 4. Weave over two- under two mattes. 5. Weave over three- under three mattes. 6. Weave hexagonal matte. 7. Weave square pattern matte 8. Weave blocking matte. 9. Weave check pattern matte. 10. Weave check pattern matte. 11. Clean and remove dusts and particles. 12. Clean and remove dust and particles object. 13. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Weave matte piece in required size and shape</p> <p><u>Standard (How well) :</u> Matte woven in required size and shape.</p>	<ul style="list-style-type: none"> ➤ Concept of matte weaving ➤ Types of matte ➤ Types of splint ➤ Weaving techniques assigning various types of matte ➤ Safety precaution

Tools/Equipments: Choya, scissors, Knives, glue, cloth etc

Safety: Handle tools safely

Task Analysis

TASK NO. 9 Prepare carving/embroidery patterns.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Enlist carving patterns. 3. Collect required tools and template. 4. Collect work pieces. 5. Perform light burning over the surface of work piece for black coloring. 6. Prepare square carving pattern. 7. Prepare star pattern 8. Prepare flower pattern. 9. Prepare gajur pattern. 10. Clean and remove dust and particles object. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment materials, drawing and template</p> <p><u>Task (What) :</u> Prepare carving/embroidery patterns.</p> <p><u>Standard (How well) :</u> Various carving and patterns of well prepared as per drawing.</p>	<ul style="list-style-type: none"> ➤ Concept of carving and embroidery patterns ➤ Types of carving and embroidery patterns. ➤ Uses of carving and embroidery pattern ➤ Technique of preparing carving and embroidery pattern ➤ Safety precaution

Tools/equipments: Knife, Chisels, Scissor, Glue (adhesive), Oil stone & Cleaning cloth

Safety: Handle of sharp edged tools safely

Task Analysis

TASK NO. 10 Apply glue for joining pieces

Time: 3 hrs
Theory: 1 hr
Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools for glue application. 3. Obtain the gluing materials. 4. Collect component parts. 5. Prepare surface where the glue is applied. 6. Apply glue as required. 7. Join component parts 8. Clamp glued component parts. 9. Clean and remove dust and particles object. 10. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Apply glue for joining pieces</p> <p><u>Standard (How well):</u> Glue applied for joining component parts.</p>	<ul style="list-style-type: none"> ➤ Introduction to gluing materials ➤ Importance of glue ➤ Types of glue ➤ Glue applying techniques ➤ Safety precaution

Tools/equipment: Glue, cloth etc

Safety: Handle tools safely

Task Analysis

TASK NO. 11 Make plain/slant/round/pagoda roof

Time: 12 hrs

Theory: 2 hrs

Practical: 10 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect materials 3. Collect tools and equipments 4. Draw free hand sketch of plain roof, slant roof, round roof and pagoda type roof 5. Measure and work piece into required size. 6. Cut work piece into required size 7. Prepare surfaces and edges of cut piece. 8. Prepare members of roof structure. 9. Join members of roof structure. 10. Prepare plain roof. 11. Prepare slant roof. 12. Prepare round roof. 13. Prepare pagoda roof. 14. Make roof in required size, shape and style. 15. Clean and remove dust and particles object. 16. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Make plain/slant/round/Pagoda roof.</p> <p><u>Standard (How well):</u> Plain, slant, round and pagoda roofs made in different size, shape and style as per obtained sketch.</p>	<ul style="list-style-type: none"> ➤ Introduction to different types of roof ➤ Importance of different types of roof ➤ Size, shape and style of roof ➤ Design and sketch of roofs. ➤ Making techniques ➤ Safety precaution

Tools/equipment: Hand saw, plash, vice, knives, measuring tape, hammer, chisel pliers, glue etc

Safety: Handle tools safely

Task Analysis

TASK NO. 12 Make clock base/flower base/lamp base/temple base

Time: 11 hrs
Theory: 2 hrs
Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect materials 3. Collect tools and equipments 4. Measure and work piece into required size. 5. Cut work piece into required size 6. Prepare surfaces and edges of cut piece. 7. Prepare members of base structure. 8. Join members of base structure. 9. Prepare clock base. 10. Prepare flower base. 11. Prepare lamp base. 12. Prepare temple base. 13. Make roof in required size, shape and style. 14. Clean and remove dust and particles object. 15. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, necessary tools, equipments and materials</p> <p><u>Task (What):</u> Make clock base/flower base/lamp base/temple base.</p> <p><u>Standard (How well):</u> Clock base, flower base, amp base and temple base made in different size, shape and style as per obtained sketch.</p>	<ul style="list-style-type: none"> ➤ Introduction of base(stand) ➤ Importance of base ➤ Types of base ➤ Size, shape and style of base ➤ Design and sketch of base ➤ Making techniques of base ➤ Safety precaution

Tools/equipment: Hand saw, plash, vice, knives, measuring tape, hammer, chisel, glue etc

Safety: Handle tools safely

Module M3

Bamboo Stem Based Handicrafts

Description

This sub module is designed to equip trainees with the knowledge and skills on bamboo stem based decorative articles making requires to be performed by this level of artisan. This sub module intends to deals with Designing & sketching of various decorative articles, Preparing carving patterns and component piece, Joining works and Making of different decorative articles as well as their finishing. According to volume and nature of tasks trainees can work in group and individually.

Objectives:

After completion of this module the trainees will be able:

1. To prepare different components parts of different decorative articles
2. To join different structural frame work as component pieces
3. To make different stem based bamboo handicraft (decorative articles)

Module Structure (M3)

S.N.	Code	Module	Nature	Total hours	Full marks
1	M3	Preparation of component Parts	T+P	140	100
Total				140	100

Instruction for trainer:

Trainers are requested to assign only those tasks which can be performed by the trainees with in the above mentioned specific time among the tasks given below.

Tasks:

1. Prepare component piece
2. Join structural frame work/component piece
3. Join mat on frame work
4. Make triangular /square tray
5. Make photo frame
6. Make five angled/ square letter box
7. Make flower vase (for table & wall)
8. Make pen stand
9. Make churi stand
10. Make tips box
11. Make dust bin (Basket)
12. Make hair clip
13. Make hair comb
14. Make soap case
15. Make hand fan
16. Make pipe (bansuri)
17. Make drum madal
18. Make napkin holder
19. Make tooth pick holder
20. Make gate
21. Make pooja basket
22. Make wall lamp/table lamp stand
23. Make phone holder
24. Make cassette rack
25. Make wall stand clock
26. Make house
27. Make temple

Task Analysis

TASK NO. 6 Prepare component piece.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Determine the components to be developed. 3. Collect tools and equipment. 4. Obtain design template. 5. Obtain work pieces. 6. Measure and mark pieces. 7. Trim work pieces. 8. Skin work pieces. 9. Prepare splint. 10. Prepare frames 11. Prepare lippings. 12. Weave matte. 13. Prepare carving pattern. 14. Prepare roof. 15. Clean and remove dust and particles object. 16. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make component piece.</p> <p><u>Standard (How well) :</u> Component piece made as per sketch.</p>	<ul style="list-style-type: none"> ➤ Introduction of component piece. ➤ Types of materials ➤ Technique of making component pieces

Tools/equipments: Knife, Chisels, Oil stone & cleaning cloth

Safety: Handle of sharp edged tools safely

Task Analysis

TASK NO. 1 Join structural frame work/component piece. **Time: 4 hrs**
Theory: 1 hr
Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Enlist structural joinery 3. Enlist structural frame work. 4. Determine the structural framework to be joined. 5. Collect tools and equipment. 6. Obtain structural frame work. 7. Join splint. 8. Join frames. 9. Join boarders. 10. Weave matte. 11. Prepare carving pattern. 12. Prepare roof 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Join structural frame work/component piece.</p> <p><u>Standard (How well) :</u> Structural frame work joined as per sketch.</p>	<ul style="list-style-type: none"> ➤ Concept of structural joinery ➤ Types of structural frame work. ➤ Structural frame Working techniques ➤ Safety precaution

Tools/equipments: Knife, Chisels, Scissor, Glue (adhesive), Oil stone, & Cleaning cloth

Safety: Handle of sharp edged tools safely

Task Analysis

TASK NO. 2 Join matte on frame work

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Enlist joinery on matte frame work 3. Collect materials and tools 4. Set matte in required size and shape 5. Join matte on frame. 6. Clean and remove dust and particles object. 7. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Join matte of frame work.</p> <p><u>Standard (How well) :</u> Matte piece on frame work joined as per sketch.</p>	<ul style="list-style-type: none"> ➤ Concept of joinery on matte ➤ Frame work ➤ Setting techniques ➤ Matte joining technique. ➤ Safety precaution

Tools/equipments: Knife, Chisels, Scissor, Glue (adhesive), Oil stone, & Cleaning cloth

Safety: Handle sharp edged tools safely

Task Analysis

TASK NO. 3 Make triangular tray/ square tray.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Prepare matt board for base. 15. Join matt board on the base. 16. Join base & border according to the instruction. 17. Prepare lippings (border stripes). 18. Fix lippings (border stripes). 19. Assemble components pieces of triangular/square tray. 20. Clean and remove dust and particles object. 21. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make triangular tray.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Structural works joined correctly. Matte board base joined. Lippings pasted.</p>	<ul style="list-style-type: none"> ➤ Concept of triangular tray and square tray as a decorative item ➤ Sketch of triangular tray and square tray ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 4 Make photo frame.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain design template. 4. Arrange work-place. 5. Select required main & auxiliary materials. 6. Collect required main & auxiliary materials. 7. Trim bamboo in required cut piece. 8. Process Skinning of the entire cut piece. 9. Split cut piece in required stripes. 10. Dry stripes. 11. Prepare choya (splints) in required width & gauge. 12. Prepare component pieces as per template. 13. Make joints as required by the work. 14. Join structural frame-works. 15. Prepare lippings (border stripes). Paste lipping (border stripes). 16. Assemble components pieces of photo frame. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make photo frame.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Structural works joined. Lippings pasted.</p>	<ul style="list-style-type: none"> ➤ Concept of photo frame as a decorative item ➤ Sketch of photo-frame ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 5 Make five angled/ square letter box

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Prepare lippings (border stripes). 15. Fix lippings (border stripes). 16. Assemble components pieces of letter box. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make five angled/ square letter box.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Structural works joined correctly. Lippings pasted correctly.</p>	<ul style="list-style-type: none"> ➤ Concept of letter box as a decorative articles ➤ Shape of letter box ➤ Sketch of letter box ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO.6 Make flower vase (for table and wall).

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of flower vase. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make flower vase (for table/wall).</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept flower vase as a decorative item ➤ Sketch of flower vase ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 7 Make pen stand.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of pen stand. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make pen stand.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Woven matte Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of pen stand as a decorative item ➤ Sketch of pen stand ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 8 Make churi (bangle) stand.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Prepare component pieces as per template. 11. Make joints as required by the work. 12. Join structural frame-work of base & border frame 13. Join base & border according to the instruction. 14. Prepare lippings (border stripes). 15. 1Fix lippings (border stripes). 16. Assemble components pieces of churi stand. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make churi (bangle) stand.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Structural works joined. Lippings pasted.</p>	<ul style="list-style-type: none"> ➤ Concept churi stand as a decorative item ➤ Sketch of churi stand ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 9 Make tips box.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Prepare component pieces as per template. 11. Make joints as required by the work. 12. Join structural frame-work of base & border frame 13. Join base & border according to the instruction. 14. Prepare lippings (border stripes). 15. Fix lippings (border stripes). 16. Assemble components pieces of tip box. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make tips box.</p> <p><u>Standard (How well) :</u> Primary processing work done correctly. Component pieces prepared. Required joints made. Structural works joined. Lippings pasted.</p>	<ul style="list-style-type: none"> ➤ Concept of tips box as a decorative item ➤ Sketch of tips box ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, White glue ,Cotton cloth, Scratching brush, Handsaw, Hacksaw, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Clips, Oil stone, Try-square, Metal ruler, Small nails, Leather pad, Glove, Ply-wood etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 10 Make dust bin (basket).

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Weave basket. 12. Assemble components pieces of dust bin. 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make dust bin.</p> <p><u>Standard (How well) :</u> Primary processing work done. Various types of choya prepared. Woven basket. Surface finished with correct</p>	<ul style="list-style-type: none"> ➤ Concept of dust bin as a decorative item ➤ Sketch of dust bin ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 11 Make hair clip.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make hair curve clip. 11. Drill holes on the clip. 12. Make stick (pin). 13. Assemble components pieces of hair clip. 14. Clean and remove dust and particles object. 15. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make hair clip.</p> <p><u>Standard (How well) :</u> Primary processing work done. Curve clip made. Holes drilled. Stick made.</p>	<ul style="list-style-type: none"> ➤ Concept of hair clip as a decorative item ➤ Sketch of hair clip ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bit, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Pliers, Chisel Khukuri, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 12 Make hair comb.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive verbal instruction and design template. 2. Prepare work-place. 3. Collect required tools. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make stripes in required width and gauge. 11. Mark as required size, shape & style. 12. Cut work-piece 13. Saw teeth lines. 14. Assemble components pieces of hair comb. 15. Clean and remove dust and particles object. 16. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make hair comb.</p> <p><u>Standard (How well) :</u> Primary processing work done. Stripe made. Work piece marked. Work piece cut.</p>	<ul style="list-style-type: none"> ➤ Concept of hair comb as a decorative item ➤ Sketch of hair comb ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 13 Make soap case.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive verbal instruction and design template. 2. Prepare work-place. 3. Collect required tools. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Prepare choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base. 14. Make walls. 15. Make cover. 16. Assemble components pieces of soap case. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make soap case.</p> <p><u>Standard (How well) :</u> Primary processing work done. Choya made. Required joints made. Structural works joined correctly. Walls made. Cover made.</p>	<ul style="list-style-type: none"> ➤ Concept of soap case as a decorative item ➤ Sketch of soap case ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, Drilling machine, Bits, Blow-lamp, White glue, Cotton cloth, Scratching brush, Hacksaw Working board, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Plash, Vice, Khukuri, Small Grinder, Clips, Oil stone, Try-square, Metal ruler, Leather pad, Glove etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 14 Make hand fan.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process skinning of the entire cut piece. 8. Split cut piece in required work piece. 9. Dry work piece. 10. Cut fingers. 11. Extend fingers in required span. 12. Paste texture paper on both sides in required shape. 13. Make hole as required by the work. 14. Assemble components pieces of hand fan. 15. Clean and remove dust and particles object. 16. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make hand fan.</p> <p><u>Standard (How well) :</u> Primary processing work done correctly. Work piece split. Required fingers cut. Fingers extended. Texture paper pasted. Hole made.</p>	<ul style="list-style-type: none"> ➤ Concept of hand fan as a decorative item ➤ Sketch of hand fan ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Working table, Chisel, Vice, Khukuri, Try-square, Metal ruler, File, Leather pad, Glove, Texture paper, Glue etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 15 Make pipe (bansuri).

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Collect appropriate materials. 5. Trim bamboo in required length. 6. Process Skinning of the work piece. 7. Dry work piece. 8. Make holes as required by the work. 9. Make wooden whistling tongue. 10. Fix tongue on the mouth of the work piece. 11. Apply blow lamp to create pattern on the surface. 12. Clean and remove dust and particles object. 13. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make pipe (Bansuri).</p> <p><u>Standard (How well) :</u> Primary processing work done. Appropriate materials collected. Bamboo length trimmed. Holes made. Wooden whistling tongue made. Tongue fixed as instructions.</p>	<ul style="list-style-type: none"> ➤ Concept bansuri as a decorative item ➤ Sketch of bansuri ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, White glue, Blow lamp, Wood, Cotton cloth, Scratching brush, Handsaw, Hacksaw, Working board, Try-square, Metal ruler, Leather pad, Glove, Glue, & Chisel

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 16 Make drum madal.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect required tools. 3. Arrange work-place. 4. Collect appropriate materials. 5. Trim bamboo in required cut piece. 6. Process Skinning of the entire cut piece. 7. Dry work piece. 8. Bevel both edge in required degree. 9. Cut leather piece in required size & shape. 10. Make holes on the sides of skin piece. 11. Prepare leather tune (leather rope) as required. 12. Set leather piece on both sides of the work piece. 13. Tight up skin piece with tune correctly. 14. Prepare Black khari. 15. Set black khari on the both edge sides of madal. 16. Assemble components pieces of madal. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make drum madal.</p> <p><u>Standard (How well) :</u> Primary processing work done correctly. Appropriate materials collected. Bamboo length trimmed. Both edge beveled. Both leather piece set with tune. Black khari set.</p>	<ul style="list-style-type: none"> ➤ Concept of madal as a decorative item ➤ Sketch of madal ➤ Primary processing method. ➤ Beveling technique ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, White glue, Handsaw, Working board, Cotton cloth, Scratching brush, Handsaw, Glove, Glue, Black Working table, Chisel, Vice, Khukuri, Try-square, Metal ruler, File, Leather, & charcoal powder

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 17 Make napkin holder.

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Collect appropriate materials. 5. Trim bamboo in required cut piece. 6. Process Skinning of the entire cut piece. 7. Dry work piece. 8. Cut in required size, shape & style. 9. Bevel all inner & outer edges. 10. Assemble components pieces of napkin holder. 11. Clean and remove dust and particles object. 12. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make napkin holder.</p> <p><u>Standard (How well) :</u> Primary processing work done. Appropriate materials collected. Bamboo length trimmed. Different size, shape & style holder cut. Edge beveled.</p>	<ul style="list-style-type: none"> ➤ Concept of napkin holder as a decorative item ➤ Sketch of napkin holder ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution.

Tools/equipments:

Measuring tape, Knives, White glue, File, Working board, Cotton cloth, Scratching brush, Handsaw, hacksaw, Khukuri, Metal ruler, File, Leather pad, Glove, etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 18 Make tooth pick holder

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Collect appropriate materials. 5. Trim bamboo in required cut piece. 6. Process Skinning of the entire cut piece. 7. Dry work piece. 8. Prepare choya (splints) as required. 9. Make sticks (sinka) in required shape & style. 10. Cut sticks in standard tooth peg size. 11. Bevel one end. 12. Pack in standard bulk. 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition(Given):</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make tooth pick holder.</p> <p><u>Standard (How well) :</u> Primary processing work done correctly. Appropriate materials collected. Bamboo length trimmed. Sticks made. Sticks cut in standard size. On end beveled. Standard bulk packed.</p>	<ul style="list-style-type: none"> ➤ Concept of tooth pick holder as a decorative article ➤ Sketch of tooth pet ➤ Primary processing method ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Metal ruler, Leather pad, Khukuri, Sandpaper, Cotton cloth, Handsaw, Hacksaw, Working board, Working table, Chisel, etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 19 Make gate.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction and design template. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Join various components parts. 15. Paste various carving patterns. 16. Assemble components pieces of gate. 17. Clean and remove dust and particles object. 18. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make gate</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of gate as a decorative item ➤ Sketch of gate ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, White glue, Cotton cloth, Scratching brush, Handsaw, Hack saw, Working board, Working table, Chisel, Vice, Khukuri, Try-square, Metal ruler, File, Leather pad, Glove, etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 20 Make pooja baskets.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Weave basket. 12. Assemble components pieces of pooja basket. 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make pooja basket.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of pooja basket as a decorative item ➤ Sketch of pooja basket ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, scratching brush, Handsaw, working board, Khukuri, Metal ruler, Leather pad & Glove

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 21 Make wall lamp/table lamp stand.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of table lamp/wall lamp. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make wall lamp/table lamp stand.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of wall and table lamp stand as a item ➤ Sketch of wall lamp and table lamp ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 22 Make phone holder.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of phone stand. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make phone stand.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of phone holder as a decorative item ➤ Sketch of phone holder ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails etc

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 23 Make cassette rack.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of cassette rack. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make cassette rack.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of cassette rack as a item ➤ Sketch of cassette rack ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 24 Make wall stand clock.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of stand clock. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Make wall stand clock.</p> <p><u>Standard (How well) :</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of wall stand clock as a decorative item ➤ Sketch of wall stand ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 25 Make house.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process Skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of house. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition(Given):</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What):</u> Make house</p> <p><u>Standard (How well):</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of house as a decorative item ➤ Sketch of house ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 26 Make temple.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Arrange work-place. 4. Select required main & auxiliary materials. 5. Collect required main & auxiliary materials. 6. Trim bamboo in required cut piece. 7. Process skinning of the entire cut piece. 8. Split cut piece in required stripes. 9. Dry stripes. 10. Make choya (splints) in required width & gauge. 11. Prepare component pieces as per template. 12. Make joints as required by the work. 13. Join structural frame-work of base & border frame 14. Weave matte. 15. Assemble components pieces of temple. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition(Given):</u> Workshop, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What):</u> Make temple</p> <p><u>Standard (How well):</u> Primary processing work done. Component pieces prepared. Required joints made. Matte woven. Structural works joined.</p>	<ul style="list-style-type: none"> ➤ Concept of temple as a decorative item ➤ Sketch of temple ➤ Primary processing method. ➤ Component parts ➤ Structural frame work ➤ Safety precaution

Tools/equipments:

Measuring tape, Knives, Scissor, White glue, Cotton cloth, Scratching brush, Handsaw, Working board, Plash, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler, & Small nails

Safety:

Handle sharp edged instruments & power tools safely

Task Analysis

TASK NO. 27 Prepare surface for polishing.

Time: 10 hrs

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Define surface preparation 3. Collect tools & materials. 4. Obtain work piece. 5. Check outer & inner surface. 6. Clean surface. 7. Prepare putty 8. Apply putty to fill the hole and gaps 9. Apply sand paper. 10. Clean and remove dust and particles object. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, equipment and materials</p> <p><u>Task (What) :</u> Prepare surface.</p> <p><u>Standard (How well) :</u> All the dust and particles removed. Surface prepared for polishing.</p>	<ul style="list-style-type: none"> ➤ Requirements of surface ➤ Preparing putty ➤ Applying putty techniques ➤ Materials for surface preparation ➤ Types of sand paper ➤ Preparation technique

Tools/equipments:

Knife, Chisels, Scissor, Glue, Spirit, Shellac, Brush, Sandpaper, Cotton cloth, Bamboo dust, & cleaning cloth

Safety:

Handle product safely

Task Analysis

TASK NO. 28 Apply polish/varnish.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Define polish/varnish. 3. Collect materials. 4. Obtain work piece. 5. Check outer & inner surface. 6. Clean surface. 7. Apply polish / varnish 8. Clean and remove dust and particles object. 9. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, equipment and materials</p> <p><u>Task (What) :</u> Apply polish / varnish.</p> <p><u>Standard (How well) :</u> Polish and varnish applied as per standard.</p>	<ul style="list-style-type: none"> ➤ Importance of polishing and varnishing ➤ Polishing and varnishing materials ➤ Requirement of surface ➤ Applying technique ➤ Safety precaution

Tools/equipments:

Sandpaper, Small chisel, Spirit, Shellac, Brush, Cotton cloth, & cleaning cloth

Safety:

Handle product safely

Task Analysis

TASK NO. 29 Paste carving patterns on decorative articles.

Time: 5 hrs

Theory: 1 hr

Practical: 4 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Identify decorative articles. 3. Determine carving pattern to be pasted. 4. Collect the carving pattern. 5. Arrange the carving pattern in proportion and balance. 6. Paste the carving pattern. 7. Clean and remove dust and particles object. 8. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, equipment, materials, drawing and template</p> <p><u>Task (What) :</u> Paste carving patterns on decorative articles</p> <p><u>Standard (How well) :</u> Carving patterns pasted on decorative articles as per sketch and drawing.</p>	<ul style="list-style-type: none"> ➤ Concept of carving pattern paste ➤ Value of carving patterns ➤ Placing method of the carving pattern ➤ Technique of pasting the carving pattern ➤ Safety precaution

Tools/Equipments:

Small chisel, Brush, Cotton cloth, Cleaning cloth, white glue, Try-square, scale, pencil etc

Safety:

Handle product safely

Module Code: M4

Bamboo Root Based Handicrafts

Description:

This module intends to provide the knowledge and skills on different bamboo root based decorative articles making such as office items, birds and animals, Making of various bamboo root based decorative articles such office items, birds, animals and ornaments as well as their finishing. According to volume and nature of tasks trainees can work in group and individually.

Objectives:

After completion of this module the trainees will be able:

1. To identify and handle tools and equipment related to bamboo root based decorative article making
2. To carry out bamboo root extraction
3. To assess different sizes and shapes of extracted bamboo roots
4. To make various bamboo root based decorative articles/ decorative items

Module Structure (M4)

S.N.	Code	Module	Nature	Total hours	Full marks
1	M4	Preparation of component Parts	T+P	130	100
Total				130	100

Instruction for trainer:

Trainers are requested to assign only those tasks which can be performed by the trainees within the above mentioned specific time among the tasks given below.

Tasks:

1. Identify/handle tools and equipment
2. Extract bamboo roots from source
3. Assess different sizes/shapes of bamboo roots
4. Carve various patterns of decorative designs/ embroidery
5. Make office items (tea mat/ pen holder/ telephone holder)
6. Make ornament items (hair clip/ ring/ bracelet).
7. Make animal items (giraffe/ cow/ elephant/ zebra/ rhino/ antelope/ camel/ reindeer)
8. Make animal items (lizard/ chameleon/ snake/ crocodile)
9. Make bird items (crow/ peacock/ parrot/ lophophorus)
10. Make human heads/ statue

Task Analysis

TASK NO. 1 Identify/handle tools and equipment.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Identify the tools used in bamboo based handicraft 3. Identify the equipments used in bamboo based handicraft. 4. Enlist function of tools and Equipment. 5. Handle measuring and marking tools. 6. Handle cutting, sawing and filling tools. 7. Handle electric mini power saw. 8. Handle compressor machine. 9. Handle drilling/boring tools. 10. Handle drilling machine. 11. Handle blow torch. 12. Handle carving/embroidery making tools 13. Handle clamping tools. 14. Handle spray machine for painting 	<p><u>Condition (Given):</u> Workshop and displayed tools and equipment</p> <p><u>Task (What):</u> Identify/handle tools and equipment.</p> <p><u>Standard (How well):</u> Various tools and equipments well identified and handled.</p>	<ul style="list-style-type: none"> ➤ Identifications of tools and equipments. ➤ Function of different tools and equipment ➤ Tools handling technique ➤ Safety precautions

Tools/equipment:

Various displayed tools and equipment

Safety: Handle cutting tools in safe manner

Task Analysis

TASK NO. 2 Extract bamboo roots from source.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipment. 3. Visit site where the bamboo roots being extracted. 4. Mark the ground for trench digging if necessary. 5. Start trench digging and keep continue unless the root obtain 6. Identify main and auxiliary roots. 7. Extract main and auxiliary root from source without damaging natural structure and texture. 8. Store extracted bamboo roots. 	<p><u>Condition (Given):</u> Site and necessary extracting tools</p> <p><u>Task (What):</u> Extract bamboo roots from source.</p> <p><u>Standard (How well):</u> Bamboo roots extracted from source. Main and auxiliary bamboo roots well identified. Natural structure and texture of bamboo root kept remaining.</p>	<ul style="list-style-type: none"> ➤ Source for extraction ➤ Extracting technique ➤ Storing technique ➤ Safety precautions

Tools/equipment:

Shovel, cross cut saw, jangle measuring tape etc.

Safety:

Handle extracting tools in safe manner

Do not damage natural structure and texture of bamboo roots.

Task Analysis

TASK NO. 3 Assess different sizes/shapes of bamboo roots.

Time: 3 hrs

Theory: 1 hr

Practical: 2 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Observe extracted bamboo roots samples. 3. Identify different sizes of bamboo roots such as main and auxiliary roots. 4. Identify different shapes of bamboo roots. 5. Observe the texture of main roots and auxiliary roots. 6. Observe the texture of different sizes and shapes of bamboo root. 7. Enlist the shape of typical bamboo root. 	<p><u>Condition (Given):</u> Workshop, different sizes and shapes of displayed bamboo roots</p> <p><u>Task (What):</u> Assess different sizes/shapes of bamboo roots.</p> <p><u>Standard (How well):</u> Different sizes and shapes of bamboo roots well assessed.</p>	<ul style="list-style-type: none"> ➤ Main and auxiliary roots ➤ Identification of different sizes of bamboo root ➤ Identification different shape of bamboo roots ➤ Texture of bamboo roots

Tools/equipment:

Various displayed bamboo roots

Safety: Handle bamboo roots safely

Task Analysis

Time: 10 hrs

TASK NO. 4 Carve various patterns of decorative designs/ embroidery.

Theory: 1 hr

Practical: 9 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions. 2. Collect tools and equipment. 3. Obtain work piece 4. Observe work pieces. 5. Obtain drawing/catalog of decorative designs/ embroideries. 6. Obtain model of object to be carved. 7. Mark/trace the decorative design/embroidery on the work piece. 8. Carve commonly used/carving pattern/ embroideries such as fish embroidery/brick embroidery/flower embroidery/triangle embroidery/circle embroidery etc. 9. Apply finishing materials such as ply paper and sand paper. 10. Clean and remove dust and particles object. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given):</u> Workshop, tools equipments, materials and drawing, catalog and model of object</p> <p><u>Task (What):</u> Carve various patterns of decorative designs/ embroidery.</p> <p><u>Standard (How well):</u> Various types of commonly used embroidery carved as per catalogues and model of objects.</p>	<ul style="list-style-type: none"> ➤ Concept of decorative design ➤ Concept of embroideries carving ➤ Commonly used carving pattern ➤ Embroidery catalogues ➤ Embroidery carving technique ➤ Safety precaution

Tools/equipment:

Carving tools set

Safety:

Handle carving tools in safe manner

Task Analysis

TASK NO. 5 Make office items (tea mat/ pen holder/telephone holder).

Time: 13 hrs
Theory: 1 hr
Practical: 12 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as tea mat, pen holder and telephone holder. 8. Proceed to convert work piece into mat shape and keep continue until completion. 9. Process to convert work piece into pen holder shape. 10. Process to convert work piece into telephone holder shape. 11. Carve decorative design/embroidery over the mat/ pen holder/telephone holder as per design and drawing. 12. Check the measurement of the products. 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of office items</p> <p><u>Task (What) :</u> Make office items (tea mat/ pen holder/telephone holder).</p> <p><u>Standard (How well) :</u> Primary processing work done. Office items such as tea mat, pen holder and telephone holder made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of office items as decorative articles ➤ Drawing and catalog of tea mat, pen holder and telephone holder items ➤ Primary processing method ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board and Vice. Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Task Analysis

Time: 13 hrs

TASK NO. 6 Make ornament items (hair clip/ ring/ bracelet).

Theory: 1 hr

Practical: 12 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as hair clip, ring, and bracelet. 8. Proceed to prepared work piece into hair clip shape. 9. Proceed to convert work piece into ring shape and keep continue until completion. 10. Proceed to convert work piece into bracelet shape. 11. Carve decorative design/embroidery over prepared the hair clip/ ring/ bracelet as per design and drawing. 12. Check the measurement of the products. 13. Clean and remove dust and particles object. 14. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of ornaments</p> <p><u>Task (What) :</u> Make ornament items (hair clip/ ring/ bracelet).</p> <p><u>Standard (How well) :</u> Primary processing work done. Ornament items such as hair clip, ring, and bracelet made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of ornament items as decorative articles ➤ Drawing and catalog of hair clip, ring, and bracelet items ➤ Primary processing method ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board, Vice. Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Task Analysis

TASK NO. 7 Make animal items (giraffe/ cow/ elephant/zebra/ rhino/antelope/camel/reindeer).

Time: 46 hrs
Theory: 2 hr
Practical: 44 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as giraffe, cow, elephant, zebra, rhino, antelope, camel and reindeer. 8. Proceed to prepared work pieces into giraffe/ cow/ elephant/zebra/ rhino/antelope/camel/reindeer shape and keep continue until completion. 9. Make/insert parts of giraffe over prepared such shape of work piece. 10. Make/insert parts of cow over prepared such shape of work piece. 11. Make/insert parts of elephant over prepared such shape of work piece. 12. Make/insert parts of zebra over prepared such shape of work piece. 13. Make/insert parts of antelope over prepared such shape of work piece. 14. Make/insert parts of camel over prepared such shape of work piece. 15. Make/insert parts of reindeer over prepared such shape of work piece. 16. Carve decorative design/embroidery over the prepared giraffe/ cow/ elephant/zebra/ rhino/antelope/camel/reindeer as per design and drawing. 17. Check the measurement of the products. 18. Clean and remove dust and particles object. 19. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of animal items</p> <p><u>Task (What) :</u> Make animal items (giraffe/ cow/ elephant/ zebra/ rhino/antelope/ camel/reindeer)</p> <p><u>Standard (How well) :</u> Primary processing work done. Animal items such as giraffe, cow, elephant, zebra, rhino, antelope, camel and reindeer made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of animal items as decorative articles ➤ Drawing and catalog of giraffe, cow, elephant, zebra, rhino, antelope, camel and reindeer items ➤ Primary processing method ➤ Component parts ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Task Analysis

**TASK NO.8 Make animal items
(lizard/chameleon/snake/goro/crocodile).**

**Time: 38 hrs
Theory: 2 hr
Practical: 36 hrs**

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as lizard, chameleon, snake, goro, and crocodile. 8. Proceed to prepared work pieces into lizard/ chameleon/ snake/goro/ crocodile shape and keep continue until completion. 9. Make/insert parts of lizard over prepared such shape of work piece. 10. Make/insert parts of chameleon over prepared such shape of work piece. 11. Make/insert parts of snake over prepared such shape of work piece. 12. Make/insert parts of goro over prepared such shape of work piece. 13. Make/insert parts of crocodile over prepared such shape of work piece. 14. Carve decorative design/embroidery over the prepared lizard/ chameleon/ snake/goro/ crocodile as per design and drawing. 15. Check the measurement of the products. 16. Clean and remove dust and particles object. 17. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of animal items</p> <p><u>Task (What)</u> Make animal items (lizard/chameleon /snake/goro/crocodile)</p> <p><u>Standard (How well) :</u> Primary processing work done. Animal items such as lizard, chameleon, snake, goro, and crocodile made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of animal items as decorative articles ➤ Drawing and catalog of lizard, chameleon, snake, goro, and crocodile. ➤ Primary processing method ➤ Component parts ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Task Analysis

Time: 38 hrs

Theory: 2 hr

Practical: 36 hrs

TASK NO. 9 Make bird items (crow/ peacock/ parrot/ lophophorus).

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as crow, peacock parrot and lophophorus. 8. Proceed to prepared work pieces into items crow/ peacock/ parrot/ lophophorus shape and keep continue until completion. 9. Make/insert parts of crow over prepared such shape of work piece. 10. Make/insert parts of peacock over prepared such shape of work piece. 11. Make/insert parts of parrot over prepared such shape of work piece. 12. Make/insert parts of lophophorus over prepared such shape of work piece. 13. Carve decorative design/embroidery over the prepared crow/ peacock/ parrot/ lophophorus as per design and drawing. 14. Check the measurement of the products. 15. Clean and remove dust and particles object. 16. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of bird items</p> <p><u>Task (What) :</u> Make bird items (crow/ peacock/ parrot/ lophophorus.</p> <p><u>Standard (How well) :</u> Primary processing work done. Bird items such as crow, peacock parrot and lophophorus made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of office items as decorative articles ➤ Drawing and catalog of crow, peacock parrot and lophophorus. ➤ Primary processing method ➤ Component parts ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Task Analysis

Time: 38 hrs

Theory: 2 hr

Practical: 36 hrs

TASK NO. 10 Make statues (human head/human half body/human full body).

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect required tools. 3. Obtain working drawing. 4. Arrange work-place. 5. Select required work piece. 6. Collect required main & auxiliary materials. 7. Trim bamboo root in required cut piece of items to be made such as human head, human half body and human full body 8. Proceed to prepared work pieces into the parts of human head/ human half body/ human full body shape and keep continue until completion. 9. Make/insert parts of head over prepared such shape of work piece. 10. Make/insert parts of human half body over prepared such shape of work piece. 11. Make/insert parts of human full body over prepared such shape of work piece. 12. Carve decorative design/embroidery over the prepared human head/human half body/human full body as per design and drawing. 13. Check the measurement of the products. 14. Clean and remove dust and particles object. 15. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools, equipment, instruments, work piece, materials and catalogues or drawing or model of statues</p> <p><u>Task (What) :</u> Make statues (human head/human half body/human full body).</p> <p><u>Standard (How well) :</u> Primary processing work done. Statues items such as human head, human half body and human half body made as per drawing and design.</p>	<ul style="list-style-type: none"> ➤ Concept of statues items as decorative articles ➤ Drawing and catalog of human head, human half body and human half body ➤ Primary processing method ➤ Component parts ➤ Procedure ➤ Safety precautions

Tools/equipments:

Measuring tape, Knives, Scissor, Cotton cloth, Scratching brush, Handsaw, Working board, Vice, Khukuri, C-clamp. Leather pad, Glove, Working table, Screwdriver, Hammer, Mallet, Pliers, Chisel, Clips, Oil stone, Try-square, Metal ruler etc

Safety:

Handle sharp edged instruments tools safely

Module 5

Finishing Works Costing

Description:

This module intends to provide knowledge and skills on preparation of surface of handicraft products for polishing as well as application of polish as required. It also imparts the knowledge and skills of preparing cost handicraft product. According to volume and nature of tasks trainees can work in group and individually.

Objectives:

After completion of this module the trainees will be able:

1. To prepare surface of different bamboo stem based and root based handicraft products
2. To apply different polishing materials
3. To prepare the cost of handicraft products

Module Structure (M5)

S.N.	Code	Module	Nature	Total hours	Full marks
1	M5	Preparation of component Parts	T+P	30	25
Total				30	25

Tasks:

1. Prepare surface for polishing.
2. Prepare spirit shellac solution.
3. Apply spirit shellac (Primer).
4. Apply touch wood polish / varnish (final paint).
5. Prepare the cost of handicraft products

Task Analysis

Time: 8 hrs

Theory: 2 hr

Practical: 6 hrs

TASK NO. 1 Prepare surface for polishing.

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools & materials. 3. Obtain product. 4. Check outer surface and measurement of the product. 5. Clean surface of the product. 6. Prepare putty. 7. Apply putty to fill the hole and gaps. 8. Apply sand paper to make surface smooth and even. 9. Clean and remove dust and particles object. 10. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools and materials</p> <p><u>Task (What) :</u> Prepare surface for polishing.</p> <p><u>Standard (How well) :</u> All the dust and particles removed. Surface well prepared for polishing.</p>	<ul style="list-style-type: none"> ➤ Concept of surface preparation ➤ Requirements of surface ➤ Materials for surface preparation ➤ Types of ply paper and sand paper ➤ Function of ply paper, sand paper and putty ➤ Putty preparation technique ➤ Surface preparation technique ➤ Safety precautions

Tools/equipments:

Knife, Chisels, Scissor, Glue, Spirit, Shellac, Brush, Sandpaper, Cotton cloth, Bamboo dust, & cleaning cloth

Safety:

Handle product safely

Task Analysis

TASK NO. 2 Prepare spirit shellac solution.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools & necessary amount of materials. 3. Determine the amount to be prepared. 4. Measure/weigh the ingredients to the required amount (i. e. 1 litre spirit, 250 gram shellac, 10 gram red powder and 10 gram blue brown powder) 5. Batch the ingredients of above amount of ratio. 6. Mix the ingredients and 7. Stir mixer until it becomes consistency slurry. 8. Test the consistency of solution. 9. Ensure the solution ready for use. 10. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, necessary tools and materials</p> <p><u>Task (What) :</u> Prepare spirit shellac solution.</p> <p><u>Standard (How well) :</u> All the steps followed in sequence. Consistency and colour of solution well produced.</p>	<ul style="list-style-type: none"> ➤ Concept of spirit shellac solution ➤ Importance of spirit shellac solution ➤ Ingredients required for spirit shellac solution ➤ Preparation technique ➤ Preparation technique ➤ Safety precautions

Tools/equipments: Weighing machine, liquid measuring instrument, small bucket, stirrer etc.

Safety: Weigh and measure ingredients correctly.

Task Analysis

TASK NO. 3 Apply spirit shellac (Primer).

Time: 7 hrs
Theory: 1 hr
Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools instruments. 3. Obtain prepared spirit shellac solution. 4. Obtain the products. 5. Clean and remove dust and from products. 6. Check the prepared surface of the products. 7. Start to apply spirit shellac from the top part of the products and complete the whole surface. 8. Let the products in sun light after painting for at least two days. 9. Apply next coat as per requirement and precede step no. 8. 10. Ensure the of the surface of the products ready for final paint/polishing/varnishing. 11. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, materials and spirit shellac</p> <p><u>Task (What) :</u> Apply spirit shellac solution.</p> <p><u>Standard (How well) :</u> All the steps followed in sequence. Spirit shellac solution well applied. The texture and colour of paint in the product produced red brown colour.</p>	<ul style="list-style-type: none"> ➤ Requirement of surface of product ➤ Application procedure ➤ Safety precaution

Tools/equipments: Sandpaper, Small chisel, Spirit Shellac, Brush, Cotton cloth, & Cleaning cloth

Safety:

Handle product safely

Task Analysis

TASK NO. 4 Apply touch wood polish / varnish (final paint).

Time: 7 hrs

Theory: 1 hr

Practical: 6 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instruction. 2. Collect tools instruments. 3. Obtain touch wood polish/varnish 4. Obtain the products. 5. Clean the surface of products. 6. Start to apply touch wood polish/varnish from the top part of the products and complete the whole surface. 7. Let the products in sun light after painting for at least two days. 8. Apply next coat as per requirements and proceeds step no 7. 9. Clean and remove dust and particles object. 10. Restore all tools & remaining materials. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, materials and touch wood polish or varnish</p> <p><u>Task (What) :</u> Apply touch wood polish / varnish (final).</p> <p><u>Standard (How well) :</u> All the steps followed in sequence. Touch wood polish or varnish well applied. The texture and colour of touch wood paint in the product produced red brown colour.</p>	<ul style="list-style-type: none"> ➤ Requirement of surface of product ➤ Application procedure ➤ Safety precaution

Tools/equipments:

Sandpaper, Small chisel, Touch wood polish or varnish, Brush, Cotton cloth, & cleaning cloth

Safety: Handle product safely

Task Analysis

TASK NO. 5 Prepare the cost of handicraft products.

Time: 4 hrs

Theory: 1 hr

Practical: 3 hrs

Performance steps	Terminal Performance Objectives	Related Technical Knowledge
<ol style="list-style-type: none"> 1. Receive instructions and specification of the works. 2. Receive drawing along with specifications of the works. 3. Read dimensions of various works in the drawing. 4. Use a format of detailed estimate of quantities. 5. Measure the dimension of finished products 6. Calculate the cost of material 7. Calculate the cost of labour 8. Calculate the cost of tools depreciation 9. Sum up sub total of above steps 6, 7 & 8. 10. Enter overhead cost following prevailing Norms 11. Sum up above step 9 & 10. 12. Enter profit % age. 13. Sum up above steps 11 & 12. 14. Enter 13% VAT 15. Sum up above steps 13 & 14 to get total costing. 	<p><u>Condition (Given) :</u> Workshop, products, necessary tools, materials and touch wood polish or varnish</p> <p><u>Task (What) :</u> Prepare the cost of handicraft products.</p> <p><u>Standard (How well) :</u> The cost of handicraft products prepared following the prevailing format and procedure.</p>	<ul style="list-style-type: none"> ➤ Importance of estimating ➤ Units of measurement ➤ Estimating procedure ➤ Importance of costing ➤ Standard norms of costing ➤ Costing procedure <ul style="list-style-type: none"> ○ Cost of materials ○ Cost of labor ○ Tools depreciation cost ○ Overhead cost ○ Profit ○ Tax/VAT

Tools/equipments:

Calculator/ Detailed estimate sheet/ Pencil/ Drawings/ Rates of item of works/Government Norm for construction.

Safety:

Part: B Common Module					
Description: This module consists of skills and knowledge related to applied math, occupational health and safety, HIV/AIDS, first aid, communication, and small enterprise management applicable in the related job performances.					
Objectives: <ul style="list-style-type: none"> • To carry out simple mathematical calculations related to the occupation • To be familiar with hazards related to this occupation • To apply preventive measures for occupational health and safety • To apply first aid measures • To apply preventive measures for HIV/AIDS • To communicate with others • To apply skills of small business management 					
Sub modules: <ol style="list-style-type: none"> 1. Applied math 2. Occupational health and safety 3. First aid 4. HIV/AIDS 5. Communication 6. Small business management 					
Sub module:1:Applied Mathematics					
Description: It consists of skills and knowledge related to mathematical calculations applicable in the related occupational performances.					
Objective: <ul style="list-style-type: none"> • To carry out simple mathematical calculations that must be done for the effective performance in the occupational job. 					
Tasks: To fulfill the objective the trainees are expected to get proficiency on the following tasks/skills/steps together with their related technical knowledge:					
Th.(4 hrs) + Pr.(16hrs) = Tot.(20 hrs)				Time(hrs)	
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.
1.	Carry out simple addition applicable in job situation	Addition: <ul style="list-style-type: none"> ➤ Concept ➤ Simple calculations ➤ Application in the occupation 	0.2	0.8	1
2.	Carry out simple subtraction applicable in job situation	Subtraction: <ul style="list-style-type: none"> ➤ Concept ➤ Simple calculations ➤ Application in the occupation 	0.2	0.8	1
3.	Carry out simple multiplication applicable in job situation	Multiplication <ul style="list-style-type: none"> ➤ Concept ➤ Simple calculations ➤ Application in the occupation 	0.2	0.8	1
4.	Carry out simple division applicable in job situation	Division: <ul style="list-style-type: none"> ➤ Concept 	0.2	0.8	1

		<ul style="list-style-type: none"> ➤ Simple calculations ➤ Application in the occupation 			
5.	Carry out measurements	<u>Measurement:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Application in the occupation 	0.2	0.8	1
6.	Convert units of measurement	<u>Units of measurement:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Units of measurement ➤ Unit conversion ➤ application 	0.2	0.8	1
7.	Convert units of measuring temperature	<u>Units of measuring temperature:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Units of temperature measurement ➤ Unit conversion ➤ application 	0.2	0.8	1
8.	Calculate area	<u>Area:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
9.	Calculate volume	<u>Volume:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
10.	Calculate weight	<u>Weight:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
11.	Calculate percentage	<u>Percentage:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
12.	Calculate ratio and proportions	<u>Ratio and proportions:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
13.	Apply Pythagoras formula	<u>Pythagoras formula:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
14.	Apply unitary method	<u>Unitary method:</u> <ul style="list-style-type: none"> ➤ Concept 	0.2	0.8	1

		<ul style="list-style-type: none"> ➤ Calculation ➤ Application 			
15.	Calculate simple interest	<u>Simple interest:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
16.	Calculate unit cost	<u>Unit cost:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
17.	Calculate per unit income	<u>Per unit income:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
18.	Calculate profit and loss	<u>Profit and loss:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Formula ➤ Calculation ➤ Application 	0.2	0.8	1
19.	Perform billing	<u>Billing:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Calculation ➤ Bill format ➤ Procedure ➤ Application 	0.2	0.8	1
20.	Prepare simple balance sheet	<u>Balance sheet:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Format ➤ Procedure ➤ Application 	0.2	0.8	1
Total:			4	16	20
Sub module: 2: Occupational Health and Safety					
Description: It consists of skills and knowledge related to occupational health and safety applicable in the related occupational performances					
Objectives: <ul style="list-style-type: none"> • To be familiar with hazards related to this occupation • To apply preventive measures for occupational health and safety 					
Tasks: To fulfill the objective the trainees are expected to get proficiency on the following tasks/skills/steps together with their related technical knowledge:					
Th.(2 hrs) + Pr.(8hrs) = Tot.(10 hrs)			Time(hrs)		
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.
Be familiar with hazards related to this occupation					
1.	Be familiar with accident hazards	<u>Accident hazards:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Causes ➤ Procedures for managing this hazard 	0.2	0.8	1

2.	Be familiar with physical hazards	<u>Physical hazards:</u> ➤ Concept ➤ Causes ➤ Procedures for managing this hazard	0.2	0.8	1
3.	Be familiar with chemical hazards	<u>Chemical hazards:</u> ➤ Concept ➤ Causes ➤ Procedures for managing this hazard	0.2	0.8	1
4.	Be familiar with biological hazards	<u>Biological hazards:</u> ➤ Concept ➤ Causes ➤ Procedures for managing this hazard	0.2	0.8	1
5.	Be familiar with ergonomic/psychological / organizational factors:	<u>Ergonomic /psychological / organizational factors:</u> ➤ Concept of : ▪ Ergonomic factors ▪ Psychological factors ▪ organizational factors ➤ Procedures for managing hazards caused by these factors	0.2	0.8	1
Sub total:			1	4	4
Apply preventive measures for occupational health and safety					
1.	Wear safety wares	<u>Safety wares:</u> ➤ Identification ➤ Needs ➤ Wearing procedures	0.2	0.5	0.7
2.	Inspect workplace before working	<u>Workplace inspection:</u> ➤ Concept ➤ Principle and procedures ➤ Records keeping	0.2	0.5	0.7
3.	Inspect tools/materials/equipment before use	<u>Inspection of tools/materials/equipment:</u> ➤ Concept and identification ➤ Principle and procedures ➤ Records keeping	0.1	0.5	0.6
4.	Be prevented from accident hazards	<u>Prevention of accident hazards:</u> ➤ Concept ➤ Being prevented from accident hazards ➤ Records keeping	0.1	0.5	0.6
5.	Be prevented from physical hazards	<u>Prevention of physical hazards:</u> ➤ Concept ➤ Being prevented from physical hazards ➤ Records keeping	0.1	0.5	0.6

6.	Be prevented from chemical hazards	<u>Prevention of chemical hazards:</u> ➤ Concept ➤ Being prevented from chemical hazards ➤ Records keeping	0.1	0.5	0.6	
7.	Be prevented from biological hazards	<u>Prevention of biological hazards:</u> ➤ Concept ➤ Being prevented from biological hazards ➤ Records keeping	0.1	0.5	0.6	
8.	Be prevented from ergonomic/psychological / organizational factors that create problems/hazards.	<u>Prevention of ergonomic/psychological / organizational factors that create problems/hazards:</u> ➤ Concept ➤ Being prevented from ergonomic/psychological / organizational factors that create problems/hazards ➤ Records keeping	0.1	0.5	0.6	
	Sub total:		1	4	5	
	Total:		2	8	10	
Sub module: 3: First Aid						
	Description: It consists of skills and knowledge related to first aid measures applicable in the related occupational performances.					
	Objective: • To apply first aid measures					
	Tasks: To fulfill the objective the trainees are expected to get proficiency on the following tasks/skills/steps together with their related technical knowledge:					
	Th.(1 hrs) + Pr.(4hrs) = Tot.(5 hrs)			Time(hrs)		
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.	
1.	Carryout simple dressings	<u>Carryout simple dressings:</u> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording	0.10	0.40	0.5	
2.	Apply simple bandages	<u>Apply simple bandages:</u> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording	0.10	0.40	0.5	
3.	Apply first aid for simple wounds	<u>Apply first aid for simple wounds:</u> ➤ Concept ➤ Needs ➤ Procedures	0.10	0.40	0.5	

		<ul style="list-style-type: none"> ➤ Precautions ➤ Recording 			
4.	Apply first aid for heat /chemical burns	<u>Apply first aid for heat /chemical burns:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.10	0.40	0.5
5.	Apply first aid for injuries/cuts	<u>Apply first aid for injuries/cuts:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.10	0.40	0.5
6.	Apply first aid for fracture	<u>Apply first aid for fracture:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.10	0.40	0.5
7.	Apply first aid for simple bleeding	<u>Apply first aid for simple bleeding:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.10	0.40	0.5
8.	Apply first aid for insect bites	<u>Apply first aid for insect bites:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.05	0.20	0.25
9.	Apply first aid for animal bites	<u>Apply first aid for animal bites:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.05	0.20	0.25
10.	Apply first aid for frost bite	<u>Apply first aid for frost bite :</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.05	0.20	0.25
11.	Apply first aid for simple poisoning	<u>Apply first aid for simple poisoning:</u> <ul style="list-style-type: none"> ➤ Concept 	0.05	0.20	0.25

		<ul style="list-style-type: none"> ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 			
12.	Apply first aid for electrical shock	<u>Apply first aid for electrical shock:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.05	0.20	0.25
13.	Apply first aid for choking/drowning	<u>Apply first aid for choking/drowning:</u> <ul style="list-style-type: none"> ➤ Concept ➤ Needs ➤ Procedures ➤ Precautions ➤ Recording 	0.05	0.20	0.25
Total:			1	4	5
Sub module:4: HIV/AIDS					
Description: It consists of skills and knowledge related to safety measures to be followed for the prevention of HIV/AIDS including its management.					
Objectives: <ul style="list-style-type: none"> • To state the concept of HIV/AIDS • To apply safety measures for prevention of HIV/AIDS 					
Tasks: To fulfill the objective the trainees are expected to get proficiency on the following tasks/skills/steps together with their related technical knowledge:					
Th.(1 hrs) + Pr.(4hrs) = Tot.(5 hrs)			Time(hrs)		
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.
1.	State the concept of HIV/AIDS 1. Define HIV 2. Enlist modes of transmission of HIV 3. Enlist signs and symptoms of HIV infected person 4. Enlist stages of HIV 5. Define AIDS 6. Enlist signs and symptoms of AIDS 7. Enlist current status of global HIV/AIDS 8. Enlist difference between HIV/AIDS	<u>State the concept of HIV/AIDS:</u> <u>HIV:</u> <ul style="list-style-type: none"> ➤ Definition of HIV: ➤ Modes of transmission of HIV ➤ Signs and symptoms of HIV infected person ➤ Stages of HIV <u>AIDS:</u> <ul style="list-style-type: none"> ➤ Definition of AIDS ➤ Signs and symptoms of AIDS ➤ Current status of global HIV/AIDS ➤ Difference between HIV and AIDS 	0.5	2	2.5
2.	Apply safety measures for prevention of HIV/AIDS:	<u>Apply safety measures for prevention of HIV/AIDS:</u>	0.5	2	2.5

	<ol style="list-style-type: none"> 1. Keep touch with single partner for sexual intercourse 2. Ensure safe intercourse 3. Use condom carefully and consistently during each act of sexual intercourse incase of other than single sex partner 4. Keep away from sharing syringes, needles and other skin piercing instrument with HIV infected people 5. Keep away from sharing toothbrushes, blade razors or other instruments that could become contaminated from blood 6. Keep away from handling clothes or cloths that are visibly contaminated with blood 7. Follow positive health behavior 8. Get blood be tested to ensure HIV negative/positive 	<ul style="list-style-type: none"> ➤ Keeping touch with single partner for sexual intercourse ➤ Ensuring safe intercourse ➤ Using condom carefully and consistently during each act of sexual intercourse incase of other than single sex partner ➤ Keeping away from sharing syringes, needles and other skin piercing instrument with HIV infected people ➤ Keeping away from sharing toothbrushes, blade razors or other instruments that could become contaminated from blood ➤ Keeping away from handling clothes or cloths that are visibly contaminated with blood ➤ Positive health behavior ➤ Getting blood be tested to ensure HIV negative/positive 			
	Total:		1	4	5
Sub module: 5 : Communication					
	<p>Description: It consists of the skills and knowledge related to communication in the related occupation. Each task consists of its steps, related technical knowledge and hour distribution.</p>				
	<p>Objectives: After its completion the trainees will be able:</p>				
	<ul style="list-style-type: none"> • To handle telephone calls • To handle fax • To handle mail • To write letters • To write memos / tips / notes / notice • To perform internal communication • To perform external communication • To perform oral communication • To perform written communication 	<ul style="list-style-type: none"> • To communicate with donors To communicate with financial institutes • To link with media • To disseminate information • Write job application • Prepare Resume. • Communicate with senior. • Communicate with juniors. • Deal with customers • Request / purchase tool, supplies, materials and equipment. • Fill up leave requisition form. 			
	<p>Tasks: To fulfill the objective the trainees are expected to get proficiency on the</p>				

following tasks/skills/steps together with their related technical knowledge:					
Th.(2 hrs) + Pr.(8hrs) = Tot.(10 hrs)			Time(hrs)		
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.
1.	Handle telephone calls	<u>Handling telephone calls:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Operating principles and procedures ➤ Care and maintenance ➤ Safety precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
2.	Handle fax	<u>Handling fax:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Operating principles and procedures ➤ Care and maintenance ➤ Safety precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
3.	Handle mail	<u>Handling mail:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Operating principles and procedures ➤ Care and maintenance ➤ Safety precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
4.	Write letters	<u>Writing letters:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Types of letter ➤ Component parts of each type of letter ➤ Format of each type of letter ➤ Writing letters ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
5.	Write memos / tips / notes / notice	<u>Writing memos / tips / notes / notice :</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts of memos / tips / notes / notice 	0.1	0.4	0.5

		<ul style="list-style-type: none"> ➤ Format of memos / tips / notes / notice ➤ Writing memos / tips / notes / notice ➤ Precautions to be taken ➤ Keeping activity records 			
6.	Prepare simple report	<u>Preparing simple report:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts of a report ➤ Format of a report ➤ Writing a report ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
7.	Prepare simple proposal	<u>Preparing simple proposal:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts of a proposal ➤ Format of a proposal ➤ Writing a proposal ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
8.	Perform internal/ external communication	<u>Performing internal/ external communication:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Performing internal/ external communication ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
9.	Perform horizontal/vertical communication	<u>Performing horizontal/vertical communication:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Performing horizontal/vertical communication ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
10.	Perform oral/ written	<u>Performing oral/ written</u>	0.1	0.4	0.5

	communication	<u>communication:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Performing oral/ written communication ➤ Precautions to be taken ➤ Keeping activity records 			
11.	Communicate with financial institutes	<u>Communicating with financial institutes:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Communicating with financial institutes ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
12.	Link with media	<u>Linking with media:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Linking with media ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
13.	Disseminate information	<u>Disseminating information:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Disseminating information ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
14.	Write job application	<u>Writing job application:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts of job application ➤ Format of job application ➤ Writing job applications ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
15.	Prepare resume	<u>Preparing resume:</u> <ul style="list-style-type: none"> ➤ Concept, need, and 	0.1	0.4	0.5

		<p>importance</p> <ul style="list-style-type: none"> ➤ Component parts of a resume ➤ Format of a resume ➤ Writing resume ➤ Precautions to be taken ➤ Keeping activity records 			
16.	Communicate with senior.	<p><u>Communicating with senior:</u></p> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Communicating with senior ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
17.	Communicate with juniors.	<p><u>Communicating with juniors:</u></p> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
18.	Deal with customers/stake holders	<p><u>Dealing with customers/stake holders:</u></p> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Communicating with juniors ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
19.	Request / purchase tool, supplies, materials and equipment.	<p><u>Requesting / purchasing tool, supplies, materials and equipment:</u></p> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles, procedures, and application ➤ Requesting / purchasing tool, supplies, materials and equipment ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5
20.	Fill up leave requisition form	<p><u>Filling up leave requisition form:</u></p> <ul style="list-style-type: none"> ➤ Concept, need, and 	0.1	0.4	0.5

		<ul style="list-style-type: none"> importance ➤ Principles, procedures, and application ➤ Filling up leave requisition form ➤ Precautions to be taken ➤ Keeping activity records 				
		Total:	2	8	10	
Sub module: 6 : Small Enterprise Development						
	Description: It consists of the skills and knowledge related to small enterprise development in the related occupation. Each task consists of its steps, related technical knowledge and hour distribution.					
	Objectives: After its completion the trainees will be able: <ul style="list-style-type: none"> • To be familiar with entrepreneurship development • To prepare a business plan 					
	Tasks: To fulfill the objective the trainees are expected to get proficiency on the following tasks/skills/steps together with their related technical knowledge:					
	Th.(4 hrs) + Pr.(16 hrs) = Tot.(20 hrs)			Time(hrs)		
SN	Tasks or skills/ steps	Related technical knowledge	Th.	Pr.	Tot.	
	<u>Entrepreneurship development:</u>	<u>Entrepreneurship development:</u>				
1.	Be familiar with business / entrepreneurship	<u>Business / entrepreneurship:</u> <ul style="list-style-type: none"> ➤ Concept, definitions, need, and importance ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5	
2.	Develop qualities of a successful entrepreneur	<u>Qualities of a successful entrepreneur:</u> <ul style="list-style-type: none"> ➤ Concept and needs ➤ Qualities of a successful entrepreneur ➤ Keeping activity records 	0.1	0.4	0.5	
3.	Follow professional ethics	<u>Professional ethics:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Professional ethics ➤ Interpretation ➤ Precautions to be taken ➤ Keeping activity records 	0.1	0.4	0.5	
4.	Analyze prevailing rules / regulations/ laws /acts related to the profession	<u>Prevailing rules / regulations/ laws /acts related to the profession:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Prevailing rules / regulations/ laws /acts 	0.1	0.4	0.5	

		<ul style="list-style-type: none"> ➤ related to the profession ➤ Interpretation ➤ Precautions to be taken ➤ Keeping activity records 			
5.	Develop skills of good governance	<u>Good governance:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Principles and procedures of good governance ➤ Precautions to be taken ➤ Keeping activity re 	0.1	0.4	0.5
6.	Be familiar with entrepreneurship development/factors affecting the growth of entrepreneurship	<u>Entrepreneurship development/factors affecting the growth of entrepreneurship:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Entrepreneurship development ➤ Factors affecting the growth of entrepreneurship ➤ Precautions to be taken ➤ Keeping records 	0.1	0.4	0.5
7.	Develop an entrepreneurship competency development [ECD] program	<u>Entrepreneurship competency development [ECD] program:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Entrepreneurship competency development [ECD] ➤ ECD program development ➤ Precautions to be taken ➤ Keeping records 	0.1	0.4	0.5
8.	Be familiar with identification / selection/appraising/gaining instructional a support of a project <ul style="list-style-type: none"> • Be familiar with identification of a project • Be familiar with selection of a project • Be familiar with appraising of a project • Be familiar with gaining instructional a support of a project 	<u>Identification / selection/appraising/gaining instructional a support of a project:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Identification of a project ➤ Selection of a project ➤ Appraising of a project ➤ Gaining instructional a support of a project ➤ Precautions to be taken ➤ Keeping records 	0.1	0.4	0.5
9.	Be familiar with the preparation of a comprehensive business plan	<u>Be familiar with the preparation of a comprehensive business plan</u>	0.1	0.4	0.5

	for starting / acquiring /running a business	<u>for starting / acquiring /running a business:</u> <ul style="list-style-type: none"> ➤ Preparation of a comprehensive business plan for starting a business ➤ Preparation of a comprehensive business plan for acquiring a business ➤ Preparation of a comprehensive business plan for running a business ➤ Precautions to be taken ➤ Keeping records 			
10.	Be familiar with marketing of products	<u>Be familiar with marketing of products:</u> <ul style="list-style-type: none"> ➤ concept of product, price, place, promotion ➤ marketing of products ➤ Precautions to be taken ➤ Keeping records 	0.1	0.4	0.5
		Sub total:	1	4	5
	<u>Business plan:</u>	<u>Business plan:</u>			
11.	Collect related information / data	<u>Collecting related information / data:</u> <ul style="list-style-type: none"> ❖ Concept, need, and importance of data and information ➤ Difference between data and information ➤ Principles and procedures for collecting related information / data ➤ Collecting related information / data ➤ Precautions to be taken ➤ Keeping records 	0.4	1.6	2
12.	Prepare production plan	<u>Preparing production plan:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts ➤ Format ➤ Principles and procedures ➤ Precautions to be taken ➤ Keeping records 	0.4	1.6	2
13.	Prepare cost plan	<u>Preparing cost plan:</u> <ul style="list-style-type: none"> ➤ Concept, need, and importance ➤ Component parts ➤ Format ➤ Principles and procedures ➤ Precautions to be taken 	0.4	1.6	2

		➤ Keeping records			
14.	Prepare financial plan	<u>Preparing financial plan:</u> ➤ Concept, need, and importance ➤ Component parts ➤ Format ➤ Principles and procedures ➤ Precautions to be taken ➤ Keeping records	0.4	1.6	2
15.	Prepare marketing plan	<u>Preparing marketing plan:</u> ➤ Concept, need, and importance ➤ Component parts ➤ Format ➤ Principles and procedures ➤ Precautions to be taken ➤ Keeping records	0.4	1.6	2
16.	Prepare a business plan	<u>Preparing a business plan:</u> ➤ Concept, need, and importance ➤ Component parts ➤ Format ➤ Principles and procedures ➤ Precautions to be taken ➤ Keeping records	0.6	2.4	3
17.	Appraise business plan	<u>Appraising business plan:</u> ➤ Concept, need, and importance ➤ Principles and procedures ➤ Precautions to be taken ➤ Keeping records	0.4	1.6	2
		Sub total:	3	12	15
		Total:	4	16	20
		Common module total:	14	56	70

Reference Books:

1. औद्योगिक शिक्षा, बेतबाँस कक्षा ९, श्री ५ को सरकार, शिक्षा मन्त्रालय, पाठ्यक्रम विकास केन्द्र, सानोठिमी, भक्तपुर, २०५६ ।
2. औद्योगिक शिक्षा, बेतबाँस कक्षा १०, श्री ५ को सरकार, शिक्षा मन्त्रालय, पाठ्यक्रम विकास केन्द्र, सानोठिमी, भक्तपुर, २०५७ ।
3. पूर्व व्यावसायिक शिक्षा कक्षा ७, श्री ५ को सरकार, शिक्षा तथा खेलकुद मन्त्रालय, पाठ्यक्रम विकास केन्द्र, सानोठिमी, भक्तपुर, २०६२ ।
4. बाँस तथा निगालोका वस्तुहरूको नमूना पुस्तिका, संकलन तथा विकास, श्री ५ को सरकार, उद्योग वाणिज्य तथा आपूर्ति मन्त्रालय, घरेलु तथा साना उद्योग विकास समिति, त्रिपुरेश्वर, काठमाडौं, २०६१ ।
5. **Basketry from Nepal**, Trade Promotion Centre, Export Service Center, KTM
6. **Textile and Bamboo Crafts of the North Western Region**, Aditi Shirali, National Institute of Design, Mumbai, India