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SYLLABUS FOR

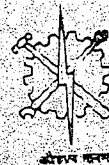
CANE WILLOW AND BAMBOO WORKER

Under
CRAFTSMEN TRAINING SCHEME

As approved by
GOVERNMENT OF INDIA

In consultation with
THE NATIONAL COUNCIL FOR
VOCATIONAL TRAINING

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MINISTRY OF LABOUR

DIRECTORATE GENERAL OF EMPLOYMENT & TRAINING

SHRAM SHAKTI BHAWAN, NEW DELHI-110001

1982

TRADE COMMITTEE MEMBERS FOR THE TRADE OF
CANE, WILLOW AND BAMBOO WORKER

...

CHAIRMAN :

1. Shri Om Prakash, : Directorate of Industries,
I.A.S. Tripura.
Director of Industries.

MEMBERS :
(S/shri..)

1. S.K.Roy, : Directorate of Industries,
Dy. Director of Industries. Tripura,
Agartala.
2. Ashutosh Kumar, : Bamboo and Cane Development
Dy. Director. Institute,
Govt. of India,
Agartala.
3. P.K.Sen Gupta, : Tripura Handloom & Handi-
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4. A.R. Mukherjee, : Directorate of Industries,
Asstt. Director of Indus- Design Extension Centre,
tries. Indra Nagar,
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Tripura.
5. B.K.Nandi, : Craft Teacher's Training
Ex-Principal. Institute,
Agartala,
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6. Rajendra Sutradhar, : Crafts Teachers and Training
Instructor Basketry. Institute,
Agartala,
Tripura.
7. Sachindra Kr. Das, : Joynagar,
Retired Master Craftsman, Agartala.
(Basketry),
- P. Kanu Ranjan Chakraborty, : Cane Willow & Bamboo Worker,
Instructor. I.T.I., Indra Nagar.

FOR THE TRADE OF
M300 WORKER

GENERAL INFORMATION

- | | |
|---|---|
| <p>Directorate of Industries,
Tripura.</p> <p>Directorate of Industries,
es. Tripura,
Agartala.</p> <p>Bamboo and Cane Development
Institute,
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Institute,
Agartala,
Tripura.</p> <p>Crafts Teachers and Training
Institute,
Agartala,
Tripura.</p> <p>Joynagar,
sman. Agartala.</p> <p>erty, : Cane Willow & Bamboo Worker,
I.T.I., Indra Nagar.</p> | <p>1. <u>Name of the Trade</u> : Cane, Willow & Bamboo Worker</p> <p>2. <u>H.C.O. Code No.</u> : 942.10, 942.15, 942.20, 942.40
942.50, 942.60, 942.70, 942.75,
942.80, 942.85.</p> <p>3. <u>Entry Qualification</u> : Passed the VIII class exami-
nation under 10+2 system of
education or its equivalent.</p> <p>4. <u>Duration of Craftsman
Training.</u> : 1 Year.</p> |
|---|---|

SYLLABUS FOR THE TRADE OF CANE, WILLOW AND BAMBOO WORKER UNDER

CRAFTSMAN TRAINING SCHEME

Period of Training - 1 Year

UNITWISE BREAK-UP OF SYLLABUS

(Total No. of Unit - 2)

UNIT - 1

Period 6 Weeks

A-1 Trade Theory :

Introduction to the Trade and Craft :

Introduction to main raw materials and simple hand tools :

- i) Cane, Willow, Bamboo etc. - their description, classifications, properties and uses. Their natural and commercial sizes, sources and distributions.
- Selection of raw materials for different kinds of work.

Tools :

Hand dao with stand, hand saw, knife, scissor, vice, measuring tape and 4 fold wooden rule etc.

2. Simple Calculations involving :

Additions, subtraction, multiplication and divisions.

3. Drawing:

Free hand sketching of straight lines rectangles, squares circles and polygons.

B. TRADE PRACTICAL :

- i) Practice of cleaning and scraping cane, willow, bamboo and others fibres basketry materials.
- ii) Practice of cutting and splitting cane, willow & bamboo etc. (with the consideration to use these in jobs subsequently).
- iii) Practice to identify the different kinds of cane, willow, bamboo and other raw materials for different types of work.
- iv) Practice of using common hand tools.

Jobs to be produced during this period :

- a) Map Pointer (Time - 2 Hours).
- b) Scale - 30 cm (6 - Hours).
- c) Pen stand (8- Hours).
- d) Bird sime (8 - Hours).
- e) Bamboo Flower (8 - Hours),
- f) Simple weave with bamboo strips (12 -Hours).

UNIT - 2

Period - 6 Weeks

A-1 Trade Theory :

Introduction to machineries and tools - their names, description, uses, care, maintenance, safety precautions, first aids.

Machineries :

Jig saw machine, ball press, drilling machine, sewing machine etc.

Tools :

i) Measuring Tools :

Tape, scale, divider, outside caliper, inside caliper, try square, wire gauge.

ii) Marking Tools :

Marking awl, compass, marking gauge.

iii) Cutting Tools :

Hand dao, chisels, hand saw, knife, scissor, iron jack plane, multi blade bamboo splitter.

iv) Boring Tools :

Hand drill, gimlet etc.

v) Impelling Tools :

Mallet, hammer.

vi) Cramping Tools :

Bench vice, bench hold fast, plier, pincer.

vii) Bending Tools :

Blow lamp, bending form (Template) of different size and shape etc.

viii) Abbrading Tools :

Files, stone.

ix) Varnishing Tools :

Brushes, enamel bowl, mug, shoe brush.

2. Simple Calculation :

Common fractions : Reduction of common fractions to decimals, conversions of decimals to common fraction:

3. Drawing :

Free hand sketching of simple perspectives.

B-TRADE PRACTICAL :

i) Practice the operations of machineries & equipment. Sharpening of hand cutting tools.

ii) Practice the technique of making strips of cane, bamboo of different width and thickness for assorted items (To be used in jobs subsequently).

iii) Practising the preparation of fine splits for weaving.

Jobs to be undertaken during this period :

- | | | |
|--------------------------------|-----|-----------|
| i) Waste paper basket | ... | 12 Hours. |
| ii) Folding bamboo tray | ... | 12 Hours. |
| iii) Cup rest | ... | 18 Hours. |
| iv) Horse (Randing type weave) | ... | 4 Hours. |
| v) Beat from Bamboo (Solid) | ... | 8 Hours. |

UNIT-3

A-1 Trade Theory :

Period 4 weeks

Seasoning, preservation including chemical treatment of cane, willow, bamboo, wood and other raw materials used for different products to prevent insect attack and mould (fungus) attach.

Equipment for treatment their description, chemicals for treatment, preparation of solutions, procedure for different treatment processes. Uses of varnishes, paints, thinner, colour etc.

Description of common operations pertaining to the trade :

Selection, measuring, marking, sawing, splittings, cutting, peeling, sizing, skying, smoothening, jointing, drilling, heating, bending, nailing, varnishing, colouring, dyeing, clazing etc.

2. Simple Calculations :

Metric System : Metric weights and measurements units - conversions problems.

3. Drawing :

Free hand sketching of simple objects : plan, elevations and side views of simple objects.

B. TRADE PRACTICAL :

i) Practice the method of preservation to prevent insects and fungus attack.

ii) Practice to bend and twist cane, bamboo etc. by heating and other processes.

iii) Practice the technique of different basketry joint.

iv) Practice of varnishing and painting jobs done in Unit 1 and 2.

Jobs to be undertaken during this period :

1. Marketing Bag. : 32 Hours.

UNIT - 4

Period 6 Weeks

A-1 Trade Theory :

I. Common Weaves : Plaiting.

- | |
|------------------------|
| a) Randing. |
| b) Rib Randing. |
| c) Slowing. |
| d) French Randing. |
| e) Simple Pairing. |
| f) Reversible Pairing. |

g) Chain Pairing.
h) Waling.

i) Reversible Waling.

j) Chair Waling or Indian arrow.

k) Ring Weave.

l) Three wayholes Weave.

m) Two Tone Four Way Holes Weave.

n) Two after two weave.

o) Three after three weave.

p) Lace making weave.

q) Diamond Type Weave.

r) Hexagonal Type Weave.

s) Sun Weave.

II. Coiling :

a) Simple over sewn coil.

b) Figure of 'g'

c) Lazy square.

III. Technical Terms :

Back	Belly	Butt	Tip
Skein	Peeled cane or Reed.		Weaver
Basket	Basketry	Base	Lid
Lapping	Border	Stick	Stake
Bye stake	Liner	Fitching	Fitch Pairing
Foot	Hoop	Scallom	Up sett.
League	Lege	Listing	Pricking up.
Stroke	Slype	Slath	Trunk Cove.
Picking up	Rod	Withe	Round
Gram	Bow or Bow Roa	Spale	Spale
Trac	Slew	Spale	Bow mark
			Gram.

IV. Introduction to templates and dies :

A-2: Simple Calculations :

Percentage and its application, ratio & proportion.

A-3 : Drawing :

Reading of simple drawing, views of simple hollow and solid bodies.

B-TRADE PRACTICAL :

i) Practice the different methods of weaving.

ii) Practice to press bamboo weaven mats into different shapes and sizes using hand operated press and dies.

iii) Practice the preparation of baskets of simple design.

Jobs to be under taken during the period :

1. Flower Basket ... 30 Hours

2. Pressed Plate (Bamboo). ... 20 Hours.

UNIT-5 Period 4 weeks.

A-1- Trade Theory :

Description of fitting materials for cane work and their uses:

Such as cane made loops, hinges, hasps, ties, bands, button, clips.

Subsidery raw materials :

Such as rexing, leather, thread, cloth, different types of adhesive, sand paper, rivets, pins, nails, button, hinges, screw etc.

Description of borders and their uses :

Such as plain border, track border, plated border, rope border, scallom border, disigned border, two way weave border, three way weave border, ring weave border and common regional borders and end bindings.

2. Simple Calculation :

Mensuration : Areas of rectangles, squares, triangles, circles and regular polygons.

3. DRAWING :

Simple isometric drawing, free hand sketching or different operations, products etc.

B-TRADE PRACTICAL :

- i) Practice the technique or different types of border and bindings.
- ii) Making baskets and other traditional items.
- iii) Making furniture frames using cane and bamboo.

Jobs to be undertaken during this period :

1. Mora - 70 Hours.

UNIT - 6 : Period 6 Weeks

A-1 Trade Theory :

Description of manufacturing process of cane furniture :

Such as chair, table, tea pot, their design and construction, factors involving strength and shape, legs, crosses, cross runners, arms, arm-runners, back pitch, arm pitch, hoop, hoop - inside, stretcher etc.

Introduction to functional design and selection of suitable design.

2. Simple calculations :

Calculation or volumes and weights of simple bodies.

3. Drawing :

Dimensioned drawing of different products.

B. Jobs to be completed in this period :

- i) Cane chair 72 Hours.
- ii) Cane table 62 Hours.
- iii) Cane bamboo screen. 34 Hours.

UNIT-7 Period 4 Weeks

A-1 Trade Theory :

Description of handles and their uses :

Such as plain handle, cross handle, rope handle, bow handle, combined handle, twisted handle, lapped handle, double and single rod handle, D-handle and moving handle.

Construction of baskets for different uses. Their design and structure in relation to strength and shape - round, oval, square, rectangular.

Description of manufacturing process of school bag, marketing, bag, hand bag, picnic basket, cycle carrier, basket, hamper.

2. Simple Calculation :

Simple estimations of raw materials of particular product.

3. Drawing :

Dimensioned drawing of products.

B. Job to be produced in this period :

1. Hand bag ... 28 Hours.
2. Picnic Basket ... 56 Hours.
3. Cycle Carrier Basket... 50 Hours.

UNIT-8 Period 6 Weeks

A-1 Trade Theory :

Description of manufacturing process of non-weaving type work;

Such as toys, trays, pen stand, date calendar, fruit tray, cage, lamp stand, boat etc. Description of making bamboo chicks and mat products.

2. Simple Calculation :

Estimation of materials for particular product, costing of raw materials and finished articles. Maintenance of job cards.

3. Drawing :

Reading of drawings, blue prints and designs.

B-TRADE PRACTICAL :

i) Practice of making chick and chick products.

ii) Practice of making applique work.

iii) Practice of making products out of bamboo mat.

Job to be produced during this period :

- | | | |
|-----------------------------------|-----|-----------|
| 1. Chick | ... | 44 hours. |
| 2. Hand ran (round & half round). | ... | 8 Hours. |
| 3. Lamp shed with stand. | ... | 50 Hours. |
| 4. Scroll (applique work) | ... | 10 Hours. |

UNIT - 9

Period 8 Weeks

Revision & Test: 2 Weeks

A-1 Trade Theory :

General layout and management of a workshop - maintenance & care of machineries and tools. Code marking. Storing of raw materials and finished products. Packing and forwarding of product. Introduction to marketing channels.

2. Calculation :

Detailed estimation and costing of products.

3. Drawing :

Drawing and design of products.

B-TRADE PRACTICAL :

- i) Practice of making design on bamboo with poler work.
- ii) Practice of repairing work of articles.
- iii) Visit to different local units for on-the-job training in different production centre - 2 weeks.

Jobs to be undertaken in this period :

- | | | |
|--|-----|------------|
| 1. Bamboo tray (solid type) with poker design. | ... | 36 Hours. |
| 2. Tray with woven design (cane). | ... | 100 Hours. |
| 3. Bamboo wall pannel | ... | 24 Hours. |
| 4. Bamboo wall plaque | ... | 8 Hours. |

SOCIAL STUDIES AND ENTREPRENEURSHIP :

The syllabus has already been approved and is same for all the trades.

FINAL ACHIEVEMENT :

After completion of the course the trainees should be able to

1. Identify, select, process-up, dye, main & subsidiary raw materials required for different types of basketry ware.
2. Use properly the hand tools and operate standard equipments of the trade independently.
3. Read drawing, blue print and draw dimensioned drawings and designs of products.
4. Manufacture/Repair independently common basketry ware such as :-
 - a) Bamboo flower.
 - b) Waste paper basket.
 - c) Cup rest.
 - d) Flower basket.
 - e) Fruit basket.
 - f) Hand fan (round/half round).
 - g) Marketing bag.
 - h) Pressed plate.
 - i) Bamboo tray.
 - j) Mora.
 - k) Chair.
 - l) Table etc.
5. Calculate cost of products and identify marketing channels for raw material and finished products.

LIST OF TOOLS AND EQUIPMENT FOR THE TRADE OF
CANE, WILLOW AND BAMBOO WORKER

(For a Batch of 16 trainees)

...

A. MACHINERIES :

1.1 Jig saw - 60 cm Arm length	..	1 No.
1.2 Foot fret saw - standard size.	..	1 No.
1.3 Electric drill - 13 mm dia. capacity.	..	1 No.
1.4 Foot sewing machine industrial type.	..	1 No.
1.5 Pocker machine - standard size.	..	1 No.

B. MEASURING TOOL :

1.1 4 fold wooden rule - 60 cm.	..	16 Nos.
1.2 Tailoring tape - 153 cm.	..	16 Nos.
1.3 Steel tape - 3 mtrs.	..	4 Nos.
1.4 Cotton tape - 15 mtrs.	..	2 Nos.
1.5 Wooden scale inch/mm - 30 cm.	..	16 Nos.
1.6 Divider - 15 cm.	..	8 Nos.
1.7 Outside caliper (Flying nut type - 15 cm.).	..	8 Nos.
1.8 Inside caliper spring type - 15 cm.	..	8 Nos.
1.9 Standard wire gauge.	..	2 Nos.
1.10 Try square - 15 cm.	..	8 Nos.
1.11 Try square bevel - 15 cm.	..	4 Nos.

C. MARKING TOOL :

1.1 Pencil compass - 15 cm.	..	8 Nos.
1.2 Marking awl 3 mm dia x 15 cm.	..	8 Nos.
1.3 Marking gauge - wooden 15 cm.	..	8 Nos.

D. CUTTING TOOL :

1.1 Hand dao/Local cutter standard size.	..	16 Nos.
1.2 D.E. Knife - blade 10 cm.	..	16 Nos.

1.3 Farmer chisel.	..	2 Sets.
1.4 Gauge chisel.	..	1 Set.
1.5 Pairing chisel.	..	1 Set.
1.6 chisel bevel edge.	..	1 Set.
1.7 Chisel mortise.	..	1 Set.
1.8 Handsaw - 30 cm.	..	6 Nos.
1.9 Rip saw - 45 cm.	..	6 Nos.
1.10 Tennon saw - 30 cm.	..	4 Nos.
1.11 Cross cut saw - 40 cm.	..	4 Nos.
1.12 Coping saw - 30 cm.	..	4 Nos.
1.13 Hacksaw frame adjustable 30 cm.	..	4 Nos.
1.14 Scissor - 25 cm.	..	1 No.
1.15 Multi blade bamboo splitter.	..	1 No.
1.16 Iron jack plane 5 cm x 25 cm.	..	3 Nos.
1.17 Wooden smoothing plane 3.75 cm x 20 cm.	..	3 Nos.
1.18 Spoke shave 3.75 x 15 cm.	..	6 Nos.

E. BORING TOOL :

1.1 Hand drill capacity 0-6 mm.	..	8 Nos.
1.2 Gimlet 3 mm - 10 mm x 1 mm.	..	2 Sets.
1.3 Angar - 6,10,15 mm dia.	..	2 Each
1.4 Borkin - standard size.	..	16 Nos.

F. IMPELLING TOOL :

1.1 Wooden mallet standard size.	..	8 Nos. Each
1.2 Hammer B.P.170,250,454 gms.	..	8 Nos. Each
1.3 Hammer cross pane 100 gms.	..	8 Nos. Each

G. CRAMPING TOOL :

- | | |
|--|--------|
| 1.1 Bench vice 10 cm jaw. | 4 Nos. |
| 1.2 Carpenters vice 25 cm. jaw. | 2 Nos. |
| 1.3 Saw sharpening vice. | 1 No. |
| 1.4 'G' clamp - 15 cm. dia. | 2 Nos. |
| 1.5 Cramp 1.2 mtrs. | 4 Nos. |
| 1.6 Combination plier - 20 cm. | 6 Nos. |
| 1.7 Round nose plier - 15 cm. | 6 Nos. |
| 1.8 Side cutting plier - 15 cm. | 6 Nos. |
| 1.9 Reed cutter - 15 cm. | 6 Nos. |
| 1.10 Pincer - 20 cm. | 6 Nos. |
| 1.11 Ball press - 50 Kg. capacity. | 1 No. |
| 1.12 M.S. flat tong - standard size. | 2 Nos. |
| 1.13 M.S. flat round tong standard size. | 2 Nos. |
| 1.14 Saw set standard size. | 2 Nos. |

H. BENDING TOOL :

- | | |
|---|--------------|
| 1.1 Blow lamp 2 pint capacity. | 2 Nos. |
| 1.2 Template/Bending forma for manu-
facturing furniture frames etc. | As required. |

I. SCRAPING TOOL :

- | | |
|---|-------------|
| 1.1 File flat 15,30 cm. 2nd cut. | 2 Nos. Each |
| 1.2 File half round 15,30 cm. 2nd cut. | 2 Nos. |
| 1.3 File rasp 30 cm. | 2 Nos. |
| 1.4 File triangular - 15, 20 cm. | 2 Nos. |
| 1.5 File round 16,30 cm. 2nd cut. | 2 Nos. |
| 1.6 File saw sharpening 10 cm fine. | 2 Nos. |
| 1.7 File knife - 15 cm. | 2 Nos. |
| 1.8 Sharpening stone rough/smooth
15 x 5 x 2.5 cm. | 6 Nos. |

PRESERVATION & DYING EQUIPMENTS

- | | |
|--|--------------|
| 1. Treatment tank 6.1. sheet with lid
size 30 x 60 x 30 cms. with handles. | 2 Nos. |
| 2. Treatment tank 6.1. sheet with lid
size standard size : 210 x 35 x 30 cms. | 1 No. |
| 3. Measuring cylinder or jugs (anama)-1 | 5 Nos. |
| 4. Buckets - 7 litres capacity. | 4 Nos. |
| 5. Balance for measuring chemicals double
pan gross balance - 5 Kgs. capacity with
weight box from 0.5 gm to 1 Kg. | 1 No. |
| 6. Chemicals - Borax, boric acid, sodium
pentachlorophenates, all commercial
grade. | As required. |

DYEING :

- | | |
|--|--------------|
| 1. Enamel vat - 3 lts. capacity. | 4 Nos. |
| 2. Enamel jug - 1 lts. capacity. | 4 Nos. |
| 3. Pipet - 1 cc. capacity. | 6 Nos. |
| 4. Acetic acid. | As required. |
| 5. Dye stuff. | As required. |
| 6. Equipment for heating. | As required. |
| 7. Painting brush flat head-12,20,25 mm. | 6 Nos. Each |
| 8. Round head brush No. 0 - 10. | 8 Sets. |
| 9. Shoe brush - 10,15,20 cm. | 6 Nos. Each |

TRADE : BASKETRY WORKER

Recommended list of manufacturing articles :

1. CANE WEAVING WORK :
 - a) Waste paper basket.
 - b) Marketing bag.
 - c) Flower basket.

- d) Ladies bag (Coiling work).
- e) Fruit basket (Coiling work).
- f) Cup rest.

2. BAMBOO SOLID TYPE WORK :

- a) Map pointer.
- b) Scale 12"
- c) Bird.
- d) Pen stand.
- e) Bamboo flower.
- f) Fruit tray.
- g) Peacock lamp (Small).
- h) Boat.

3. MIXED WORK :

- a) Tray.
- b) Suit case.
- c) Table lamp.
- d) Hanging lamp.
- e) Plant pot holder.
- f) Bird cage.
- g) Wall panel.
- h) Pressed plate.

4. BASKETS :

Linen basket, Magazine basket, Picnic basket, Cycle carrier basket, Hand bag.

5. BAMBOO MAT PRODUCTS :

- a) Fan (Round).
- b) Fan (Half round).
- c) Pasting work on scroll.
- d) Table lamp (Recket).
- e) Ornament box.
- f) Scroll (Applique work).

6. TURNING WORK :

- a) Flower base.
- b) Candle stand.
- c) Bamboo made glass.
- d) Bamboo cup.

7. FURNITURE MAKING :

- a) Chair.
- b) Table.
- c) Mop screen etc.

BY INVITATION :
(S/Shri..)

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