

# INDIA SKILLS KERALA 2018

## STATE SKILLS COMPETITION

### SKILL : CARPENTRY

#### Skill- CARPENTRY

#### Skill Explained

Carpentry skill includes the production and Assembly of STRAP JOINT. The Carpenter can read and interpret drawings, carry out the set out, measure, cut form joints, assemble and finish the assigned job to meeting the desired standards by working on the issued guidelines

The artifact is named as carpenter. It includes fork, rod end and wedge. The fork has small structure with mortises (rectangular holes). The rod end lies between the ribs of fork and fixed with wedge.

Description of skill Carpentry covers the setting out and making of strap joint and other wooden structures of conventional and modern design.

**Eligibility Criteria** – Competitors born on or after 01 Jan 1997 are only eligible to attend the Competition

**Duration of test project – 6 hours**

#### Preface

**Section A** – Test Project

**Section B** – Marking Scheme

**Section C** – Infrastructure List (Tools and equipment including raw materials)

**Section D** – Instruction for Competitors

**Section E** – Health, safety and Environment

**Section A**

**FIGURE**

## **DIMENSIONS OF STRAP JOINT**

## INSTRUCTIONS FOR COMPETITORS

### Working Instructions

- After face marking and setting out the Fork, competitors must bring them to the experts for marking.
- Before drilling and assembling must present the fork to the experts for marking
- Hand tools can be utilized for finishing your work.
- The Competitors must keep track of the time by themselves.
- The timing will be stop by experts, only in cases of illness and accidents.
- The maximum working time is 6 hrs.

### Section B

#### Marking Scheme

The Assessment is done by awarding points by adopting two methods, Measurements and Judgments

Measurement- One which is measurable is used to assess accuracy, precision, and other performance which can be measured in a robust way. It is used where there should be no ambiguity.

Judgments- Based on Industry expectations is used to assess the quality of performance, for which there may be small differences of view when applying the external benchmarks.

**Measurement** is used to assess accuracy, precision, and other performance which can be measured in unambiguous way. Mark is awarded in full for a dimension within tolerance and zero when it is out of tolerance.

**Judgment** is used to assess the quality of performance, about which there may be small difference of opinion

The scores from 0 to 3 are awarded for conformity with industry standards (score 1 stands for 1/3 and score 2 for 2/3 of maximum mark allotted for the criterion).

- 0: performance below industry standard to any extent, including a non-attempt.

- 1: performance meets industry standard
- 2: performance meets industry standard and surpasses that standard to some extent
- 3: excellent or outstanding performance relative to industry's expectations

**Judgement Marking**

If maximum marks for judgment criteria is 1 and if all Experts (Juries) give 3 points to a candidate, the candidate will get 1 marks for that aspect. If 2 Experts give 3 and 1 Expert give 2 points, then candidate will get  $(2+2+1/9)*1 = 0.55$  marks for that aspect (out of 1)

**Aspects are criteria's which are judged for assessment**

**Marking**

Main criteria	Judgment	Measurement	Total
Main dimension		30	
Conforming of drawing and joints	40	10	
Assembly	10		
Surface finish and material	10		
Grand Total	60	40	100

## **MARKING SCHEME**

### **Section – C**

Workshop Installation – Tools & Equipments positioned by Organizers

Tool Kit – Tool & Equipment are not allowed to be brought by competitors for competitions

All equipment and material will be provisioned by the Organizers at site including raw material

Teak wood

### **Section -D**

#### **Working Instructions Competitors**

For Construction of fork , task -1 (First day 4Hours)

- After face marking and setting out the bracket, competitors must bring them to the experts for marking.
- Hand tools can be utilized for finishing your work.
- The Competitors must keep track of the time by themselves.
- The timing will be stop by experts, only in cases of illness and accidents.
- The maximum working time is 4 hrs.

For Construction of rod end, wedge and assembly, task -2 (second day 2Hours)

- After face marking and setting out the rod end and wedge, competitors must bring them to the experts for marking.
- Before mortising and assembling must present the bracket to the experts for marking
- Hand tools can be utilized for finishing your work.
- The Competitors must keep track of the time by themselves.
- The timing will be stop by experts, only in cases of illness and accidents.
- The maximum working time is 2 hrs.

### **Section - E**

1. All accredited participants, and supporting volunteers will abide by ruled and regulations with regards to Health, safety, and Environment of the Competition venue.
2. All participants, technicians and supporting staff will wear the required protective Personnel clothing.

3. All participants will assume liability for risk of injury and damage to property, loss of Property, which might be associated with or result from participation in the event. The Organizers will not be liable for any damage, however in case of injury the competitor will immediately inform the immediate organizer attention.

## Section - F

### Infrastructure List

#### Tools list ( for one competitor) ( to be Purchased)

1. Carpenter's pencil	01 No.
2. Marking gauge	01No.
3. Mort ice gauge	01 No.
4. Try square (6&12 inches)	01 No. each
5. Marking knife / Scriber	01 No.
6. Hand saw (300 mm)	01 No.
7. Tenon saw (200 mm)	01 No.
8. jack plane	01 No.
9. Smoothing plane	01 No.
10. Firmer chisel 20,25,35 and 50mm	01 No. each
11. Mortce chisel 10mm & 12mm	01 No. each
12. Wooden mallet	01 No.
13. Steel rule 300mm	01 No.
14. Bevel square (250 mm)	01 No.
15. Drill bit 10mm,12mm & 16mm	01 No.
16. "G" Clamp 300mm	01 No.
17. Rasp file	01 No.
18. Bench hook	01 No.
19. Oil stone 200 x 50 x 25 mm	01 No.
20. Poker chisel	01 No.
21. Gouge chisel (10 mm & 20mm)	01 No. each
22. Saw set	01 No.
23. Saw vice	01 No.
24. Screw driver (150mm & 300mm)	01 No. each
25. Tool box (standard size)	01 No.
26. Triangular File (6 inch size)	01 No.
27. Bench stop	01 No.
28. Claw Hammer	01 No.

**General machinery (Common machinery) ( to be arranged from ITI's)**

- |   |   |
|---|---|
| 1. Workbench with Carpenter's vice (jaw size 8 inch) 8 x 4 feet-- | 02 Nos workbench + 6nos carpenters vice |
| 2. Digital clock  | 01 No.                                  |
| 3. Grinding machine   | 01No                                    |
| 4. Power Drilling machine 12mm capacity                           | 01 No.                                  |
| 5. Portable jig saw   | 01 No                                   |
| 6. Portable circular saw  | 01No                                    |

**Material List (for one competitor) (to be purchased)**

Wooden piece	275 x 70 x45 mm	1nos	Teak wood
Wooden piece	150 x 45 x 45 mm	1nos	Teak wood
wedge	55 x 80 x 20 mm	1nos	Teak wood
Sand paper grade 100,80		1nos each	
Banyan waste		250gms	
Nail	1.5 inch	100gms	
Oil for Oil stone		100ml	
Radius gauge	15 mm Radius	01 No.	

**Project Timings – 6 Hours**

10.00 - 10.15 Am	Brief about the project, process, tools, safety Cleanliness & Time slot	15 minutes ( first day)
10.15 - 12.15 Pm	Start of competition- fork	2 Hours( first day)
12.15 -12.30 Pm	Tea Break (depending on the number of candidates)	15 minutes( first day)
12.30 - 1.30 Pm	fork	1 Hour( first day)
1.30 - 2.00 Pm	Lunch	30 Minutes( first day)
2.00 - 2.45 Pm	Fork finishing	45 minutes( first day)
8.00 - 10.00 Am	Rod end , wedge and assembling	2 hrs (second day)
	<b>Total</b>	<b>SIX HOUR PROJECT</b>



## Marking Scheme – Skill Carpentry-26

1	Overall length of fork should be 250 mm	10
2	Overall width and thickness of fork should be 64 mm x 38 mm	10
3	Overall size of rod end should be 125 mm x 38 mm x 38 mm	10
4	Measurements of mortise and drilling hole as per drawing	10
5	Radius (15R) marking & 60 degree angle cutting	10
6	Joints before Assembling	15
7	Joints after Assembling	15
8	Overall size of wedge	10
9	Finishing	10
		<b>Total = 100</b>

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