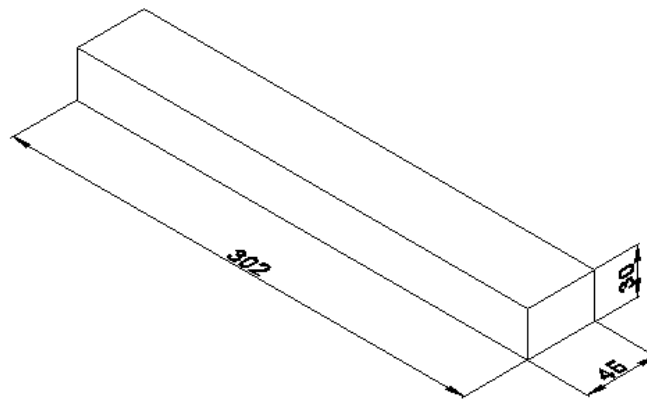
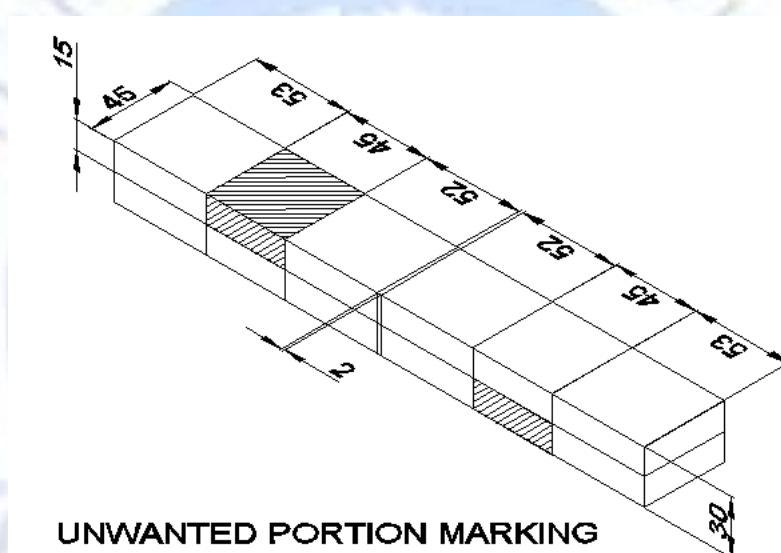


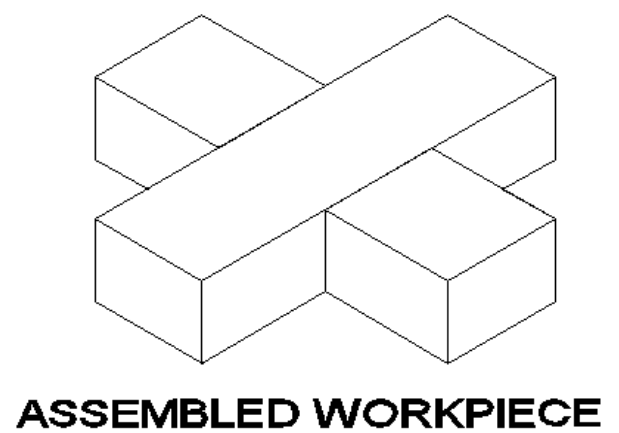
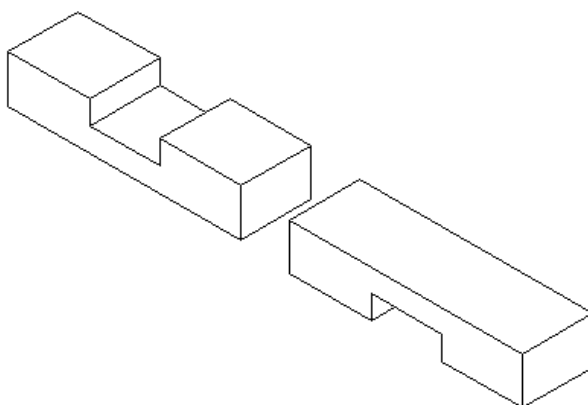
CROSS HALVING JOINT



WORK PIECE



UNWANTED PORTION MARKING



ASSEMBLED WORKPIECE

All dimentions are in mm

CROSS HALVING JOINT

Ex no :

Date :

Aim:

To produce a Cross halving joint from the given work piece.

Application:

Cross bars in a cot, Shelves, Frames for cheap flush panel doors

Material Specifications:

Venteek wood of size 302 X 45 X 30 mm

Tools Required:

- | | | | |
|-------------|------------------|-------------------|------------------|
| 1) Pencil | 2) Steel rule | 3) Try square | 4) Marking gauge |
| 5) Hand saw | 6) Firmer chisel | 7) Mortise chisel | 8) Wooden mallet |
| 9) Rasp | | | |

Sequence of operation:

- 1) Preparing 2) Marking 3) Cutting /Sawing / Chiseling 4) Finishing

Working Steps:

1) Preparing:

Prepare the work piece as described in a length of 302 mm, width 45 mm, Thickness 30 mm

2) Marking:

- Using a try square and pencil, First mark from right side of the work piece with distance of 53mm then 45mm and 52mm.
- Again draw 2mm line given for cutting clearance.
- Mark again from left side of the work piece same distance for right side.
- Using a try square and pencil, draw perpendicular line all four sides of the given work piece.
- Using marking gauge draw the center line 15 mm face edge for both side.
- The intersecting portion to be marked on the 45mm face side and 15mm face edge, one side top another side bottom.

3) Cutting /Sawing / Chiseling:

- a) Carpentry bench vice Hold the piece horizontally and tightly in a vice such that the portion to be cut is just above the jaw. Use firmer chisel, to make groove on first and second marking right side 53mm, 45mm, and 52mm
- b) Then take the work piece and place them on the right side of bench vice then use the Hand saw up to 15 mm depth on both lines.
- c) As per same procedure for another side do it.
- d) Before chiseling hold the piece horizontally and tightly in a vice such that the portion to be is just above the jaw.
- e) Now using a firmer chisel take series of cuts to remove the wood up to the bottom line, as shown in figure.

4) Finishing:

- a) Take a series of small cut delicately on both the pieces to remove the excess wood.
- b) Make it smooth with rasp.
- c) Obtain a fine finish of the top and bottom side.
- d) Then to be cut wooden piece middle of 2mm.
- e) Assemble joint and clean off Waste.

Pre Lab Questions:

1. Define carpentry?
2. Mention the types of wood used in carpentry?
3. How do you classify hand tools?
4. What is the purpose of holding tools in carpentry?
5. Why hacksaw blades made with different sized teeth?

Post lab Questions:

1. List out the measuring gauges used in carpentry?

2. Mention the applications of cross halving joints?

3. What is the use of mortise chisel?

4. How can flatness be tested in carpentry?

5. What is the cutting angle of a chisel?



Result:

The Cross halving joint produced from the given work piece, is and assembled joint was submitted for evaluation.