

CARPENTRY SHOP

Sec – A Common Syllabus

Familiarity with the Use of Various Tools Used in Mechanical Engineering Workshop:

Marking and Measuring : Steel rule, surface gauge, marking block, protractor, try square, scribe, punches, divider and callipers, surface plate, V. block, gauges (screw, pitch, radius, feeler), Vernier calipers, Micrometer Vernier height and depth gauge, use of dial gauge.

Holding Tools: Vices (Bench, leg and hand vice), clamps, tongs, pliers.

Cutting Tools : Hack saw (Fixed and adjustable frame), chisels-flat, cross cut, diamond, round nose.

Files: According to section-Knife edge, Flat, Triangular, Round, Square, Half round.

According to grade-Rough, Bastard, Second cut, Smooth and Dead Smooth.

Drills and Allied Tools : Parallel and taper shank twist drill.

Thread Cutting Tools: Taps and Dies.

Miscellaneous Tools: Wrenches, Keys, Spanners, Pliers, Screw drivers, their specification and many others which have not been named for use in various shop. They should be shown physically to each student for familiarity.

Sec - B Types of wood and timber, cutting and seasoning of wood, Decaying of wooden component

Sec - C Fundamental of wood working operations:

- Marking and Measuring.
- Holding and supporting.
- Cutting and sawing.
- Drilling and Boring.
- Turning.
- Jointing.

Sec - D Common Carpentry Tools:

Their classification, size, specification [name of the parts and use only]

Sec - E Marking and Measuring Tools: Rules, Try square, Bevel square, Marking gauge, Mortise gauge, Scribe (marking Knife), combination set.

Sec - F Holding and Supporting tools: Carpentry vice, Bench hold fast, Bar clamp, Bench hook, Hand clamp, C and G clamp.

Sec - G Cutting and Sawing Tools:

Saws: (Grip or Hand, panel, cross cut, tenon, dovetail, compass, Key hole and bow saw).

Chisel: (Firmer, dovetail, mortise and gauge),

Planes: (wooden and iron plane, Smoothing plane),

Sec - H Drilling and Boring tools: Auger, Gimlet, Hand drill, Brace and bits,

Sec - I Striking tools: Mallet and claw hammer.

Sec - J Turning tools and Equipments: Wood working lathe and lathe tools.

Sec - K Miscellaneous tools: Screw driver, Rasp, Pincer, Oil stone, Triangular File and Saw set.

Sec - L Joining of Timber Components for Fabrication Works:

Assembly of joints (Preparation steps and tools used only) Mortise, Tenon, Rivet, Groove, Tongue, Dowel, Operations in assembly Simple lap and butt, Mortise, Tenon, Dovetail, Mitre and bridge joints, Uses of glue, dowelpin and screw in preparation of joints, Common defects likely to occur during and after joining, defects due to wrong use of tools, defects due wrong operation, defects due to improper seasoning of timber their identification and remedy, Safety (personal and equipment) to be observed.