

SUBJECT TITLE : WORKSHOP PRACTICE
 (Common for ME, TD, AU)
SUBJECT CODE :
PERIODS/WEEK : 4
PERIODS/SEMESTER : 72
CREDITS : 4

TIME SCHEDULE

Module	Topic	Periods
I	Carpentry Test-I	13 3
II	Fitting Test – II	13 3
III	Foundry & Casting Test - III	17 3
IV	Smithy Test – IV	17 3
Total		72

OBJECTIVES

Upon completion of the course of study, the student should be able to:

- Perform various exercises as per the given drawing and specifications
- Identify the required tools from a given number of tools
- Select particular tool for a specified operation
- Locate the functional part of equipments and tools
- Explain the use of tools and equipment
- Prepare the edges/work piece as per drawing standard
- Set up the job as per the procedures of operation
- Perform various steps as per the procedure
- Inspect the job for achievement of accuracy and finish
- Clean the tools, instruments and work place
- Return the tools, instrument as per regulations
- Exhibit safety precautions

CONTENT DETAILS

UNIT – I: CARPENTRY

Study of Miscellaneous tools – Rasp and file, scraper, glass paper, pincers, ratchet and cabinet type screw drivers, preparation of carpentry joints, repair of furniture, making utility models

UNIT – II: FITTING

Fitting practices-cutting, filing, drilling, reaming, tapping and dieing exercises (measuring and checking instruments should be used during working)
Making dovetail joint, V-joint etc.

UNIT – III: SMITHY

Familiarization of Smithy tools

Hand tools – anvil ,swage block, hammers such as ball peen, straight peen, cross peen and sledge hammers. Tongs such as flat, hollow, cold and hot chisels, swages, fullers, flatters, set hammers, punch and drift.

Equipment: Open and closed hearth, heating furnaces, hand and power driven blowers, open and stock fire fuels such as charcoal, coal, oil and gas

Workshop Practice

Building fire in the furnace, Upsetting, bending, drawing, setting down, punching, cutting and welding exercises, Preparation of utility article like bolts, tongs, spanners

UNIT – IV: FOUNDRY AND CASTING

Familiarization of tools

Hand tools – shovel, riddle, hammers, trowels, relic, lifters, strike off bar, spruce, balloons, swab, gate

cutter, mallet, vent rod, draw spike, lifting plate, pouring weight, gaggers, clamps.

Practice

Preparation of moulding sand, Prepare moulds of different types using different patterns,

Non-ferrous metal casting using simple patterns

REFERENCE:-

1. Workshop manual by P.Kannaiah &K.L.Narayana
2. Workshop Technology vol I by S.K Hajra Choudhary
3. Workshop Technology vol II by S.K.Hajra Choudhary