Course Content & Grade

Branch	Subject Title	Subject Code	Grade for End Sem		CGPA at the end of every even semester
B.TECH. Common	Work Shop Practice	BT- 1006	Theory	Practical	
			-	Min."D"	5.0

Unit I

Introduction: Manufacturing Processes and its Classification, Casting, Machining, Plastic deformation and metal forming, Joining Processes, Heat treatment process, Assembly process. Powder Metallurgy, introduction to computers in manufacturing. Black Smithy Shop

Use of various smithy tools. Forging operations: Upsetting, Drawing down, Fullering, Swaging, Cutting down, Forge welding, Punching and drafting.

Suggested Jobs : Forging of chisel., forging of Screw Driver

Unit II

Carpentry Shop:

TimBTr : Type, Qualities of timBTr disease, TimBTr grains, Structure of timBTr, TimBTr, TimBTr seasoning, TimBTr preservation .Wood Working tools: Wood working machinery, joints & joinery. Various operations of planning using various carpentry planes sawing & marking of various carpentry joints.

Suggested Jobs :Name Plate ,Any of the Carpentry joint like mortise or tennon joint

Unit III

Fitting Shop: Study and use of Measuring instruments, Engineer steel rule, Surface gauges caliper, Height gauges, feeler gauges, micro meter. Different types of files, File cuts, File grades, Use of surface plate, Surface gauges drilling tapping Fitting operations: Chipping filling, Drilling and tapping.

Suggested Jobs :Preparation of job piece by making use of filling, sawing and chipping , drilling and tapping operations.

Unit IV

Foundry: Pattern Making: Study of Pattern materials, pattern allowances and types of patterns. Core box and core print, .Use and care of tools used for making wooden patterns. Moulding:

Properties of good mould & Core sand, Composition of Green , Dry and Loam sand. Methods used to prepare simple green and BTnch and pit mould dry sand BTnch mould using single piece and split patterns.

Unit V

Welding: Study and use of tools used for Brazing, Soldering, Gas & Arc welding. Preparing Lap & Butt joints using gas and arc welding methods, Study of TIG & MIG welding processes . Safety precautions.

Reference Books:

1. Bawa HS; Workshop Practice, TMH
2. Rao PN; Manufacturing Technology- Vol.1& 2, TMH
3. John KC; Mechanical workshop practice; PHI
4. Hazara Choudhary; Workshop Practices -, Vol. I & II.
5. Jain. R.K. Production Technology -

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