



TONTADARYA COLLEGE OF ENGINEERING, GADAG.

DEPARTMENT OF MECHANICAL ENGINEERING



SEMESTER: III/IV

FOUNDATION AND FORGING LABORATORY

CARPET AREA : 100 Sq Mts

TOTAL COST : Rs 97,000

LIST OF EQUIPMENTS

Sl. NO	PARTICULARS	QTY
1	Universal sand testing machine	01
2	Sieve shaker	01
3	Permeability test	01
4	Clay content tester	01
5	Core and Mould hardness tester	01
6	Sand muller	01
7	Non ferrous melting furnace	01

STAFF IN-CHARGE

Dr. D M Goudar
H O D

Prof. Praveen Hiremath
Faculty In-Charge

Mr. M.S.Patil
Instructor



SEMESTER: III/IV

FOUNDARY AND FORGING LABORATORY

LIST OF EXPERIMENTS

Course Code: 15/18MEL38B/48B

IA Marks: 20/40

Hours/Week:03

Exam Hours: 3

Total Hours:42

Exam Marks: 80/60

PART-A

- 1** Testing of Molding sand and Core sand. Preparation of sand specimens and conduction of the following tests:
 1. Compression, Shear and Tensile tests on Universal Sand Testing Machine.
 2. Permeability test
 3. Sieve Analysis to find Grain Fineness Number (GFN) of Base Sand
 4. Clay content determination on Base Sand.
- 2** Welding Practice: Use of Arc welding tools and welding equipment Preparation of welded joints using Arc Welding equipment L-Joint, T-Joint, Butt joint, V-Joint, Lap joints on M.S. flats

PART-B

- 3** Foundry Practice: Use of foundry tools and other equipment for Preparation of molding sand mixture. Preparation of green sand molds kept ready for pouring in the following cases:
 1. Using two molding boxes (hand cut molds).
 2. Using patterns (Single piece pattern and Split pattern).
 3. Incorporating core in the mold.(Core boxes).
 4. Preparation of one casting (Aluminum or cast iron-Demonstration only)

PART-C

- 4** Forging Operations: Use of forging tools and other forging equipment. • Calculation of length of the raw material required to prepare the model considering scale loss. • Preparing minimum three forged models involving upsetting, drawing and bending operations.

