5th SEMESTER

WELDING TECHNOLOGY

SKILL ENHANCEMENT COURSE (SEC)

WTC520S WELDING TECHNOLOGY-II

CREDITS: THEORY: 2, PRACTICAL: 2
MAX MARKS: THEORY: 30, PRACTICAL: 30
MIN MARKS: THEORY: 12, PRACTICAL: 12

THEORY (2 CREDITS)

UNIT-I

Resistance welding: equipment for resistance welding, spot welding, seam welding and their applications, advantages and limitations.

Solid state welding: friction welding process-working, advantages and disadvantages with application.

UNIT-II

Gas welding: Oxy-Acetylene gas welding- types of flames, equipment for Oxy- Acetylene welding; gas cutting techniques.

Cast welding processes: Thermit welding, electro-slag welding and their applications, advantages and limitations.

LIST OF PRACTICALS (2 CREDITS):

1) Join two metal sheets of 1.5 mm thickness through spot welding process.
2) Use of seam welding technique to make thin sheet metal cylinders.
3) Joining of 10 mm dia. solid rod using lathe machine (based on friction welding principle).
4) Welding of T section and I section using thermit welding.
5) Welding of 50 mm plate using electro-slag welding.
6) Setting of Oxy-Acetylene welding equipment and setting of flame.
7) Performing straight cuts using Oxy-Acetylene welding.
8) Marking and performing radial cuts, cut out holes using Oxy-Acetylene gas welding.
9) Making of thin metal box using Oxy-Acetylene gas welding.

LIST OF RECOMMENDED BOOKS

1. Welding Engineering and Technology by Dr. R.S. Parmer, 2nd Edition, Khanna publishers.
2. Welding Technology and Design by V. M. Radakrishnan, New age internationals.
3. Materials and Processes in Manufacturing by E. Paul Degarmo, J.T. Black, Ronald A. Kohser. Eighth Edition, Prentice Hall India.
4. Elements of Workshop Technology Vol. I and II by S. K. Hajra Choudhury, A.K. Hajra Choudhury, Nirjhar Roy. Media Promoters & Publishers Pvt. Ltd.