

No. of Printed Pages : 4

Roll No. ....

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**3rd Sem. / Mech. Engg.**

**Subject : Workshop Technology - 1**

Time : 3 Hrs.

M.M. : 100

**SECTION-A**

**Note:**Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) What is seam welding?
  - b) Name any two gases in TIG welding.
  - c) What is machine moulding?
  - d) What is function of runner in casting?
  - e) Define collapsibility of moulding sand.
  - f) What is function of draft allowance in pattern?
  - g) Which polarity is recommended for overhead welding?
  - h) Name any two materials that are used in making pattern?

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- i) What is function of core prints?
- j) Draw the symbol of spot weld.
- k) Name any one additive used in moulding sand.
- l) What is function of blow pipe in gas welding?
- m) State one advantage of using wooden pattern.
- n) What is cope in sand casting?
- o) Draw the symbol of bead weld.
- p) Write any two rolling defects.
- q) What is swaging?
- r) Name a material used for making die used in press operations.

**SECTION-B**

**Note:**Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) Define polarity in welding. In DC welding, which two types of polarities are possible?

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- ii) Explain working & principle of resistance welding.
- iii) Explain method of stamping.
- iv) Explain method of upset forging.
- v) Explain magnetic particle inspection method for testing of casting defects.
- vi) Explain working of squeeze machine in mould making.
- vii) What are limitations of use in plastics?
- viii) Explain method of wire drawing.
- ix) Explain construction of pit furnace.
- x) Write short note on filler rods & fluxes being used in gas welding in brief.
- xi) Explain any two methods used for cleaning of castings.
- xii) Explain the factors required for selection of welding electrode.
- xiii) Explain various hand tools used for mould making.
- xiv) Explain principle of arc welding.

xv) Write short note on vertical welding.

### SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain various types of welding defects with their remedies in detail.
- Q.4 Explain various desirable properties of moulding sand in detail.
- Q.5 Explain construction & working of compression moulding machine.
- Q.6 Explain the principle of MIG welding with advantages, disadvantages & applications.
- Q.7 (a) Differentiate between hot & cold extrusion.  
(b) Explain different types of dies used in press operations in brief.

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