

(DME 226)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the End of Second Year)

MECHANICAL ENGINEERING

Paper - VI : Casting, Forming And Welding Technology

Time : 3 Hours

Maximum Marks : 75

Answer question No.1 compulsory

(1 × 15 = 15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) Define gating ratio.
- b) Name the types of Extrusion.
- c) What is shearing?
- d) Name the flux used in Electro slag welding.
- e) What is cold working?
- f) Define shrinkage allowance?
- g) What is blanking?
- h) Define swaging.
- i) How electrodes are classified?
- j) Define weldability.
- k) What is resistance welding?
- l) What are the different furnaces used for making of ferrous materials.
- m) Name three pattern materials.
- n) Name the parts of gating.
- o) Mention any two casting defects.

UNIT - I

- 2) a) Explain different testing methods of moulding sands.
b) With neat sketch explain core and core box.

OR

- 3) a) What are the types of moulding materials and the equipment?
b) Explain the advantages of casting method over the other.

UNIT - II

- 4) a) Explain the continuous casting with neat sketch.
b) Name the equipments used in fettling of casting? Explain how fettling of castings prepared.

OR

- 5) a) Describe CO₂ casting process with neat sketch and also list out advantages and disadvantages.
b) Write the types of casting defects, causes and remedies.

UNIT - III

- 6) a) Explain the arc welding principle. Explain TIG welding process with neat sketch.
b) Describe the resistance welding process.

OR

- 7) a) Explain the electro slag welding with neat sketch.
b) Explain the MIG welding process with neat sketch.

UNIT - IV

- 8) a) Explain with neat sketch metal flow in Deep drawing dies?
b) Explain the direct and indirect extrusion with neat sketches.

OR

- 9) a) How the tooth paste tubes are made? Explain the process in detail with neat sketch.
b) Explain high energy rate forming of metals.

