

FACULTY OF ENGINEERING**B.E. 3/4 (Mech.) I – Semester (Supplementary) Examination, July 2014****Subject : Manufacturing Processes****Time : 3 hours****Max. Marks : 75****Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.****PART – A (25 Marks)**

- 1 Distinguish between positive and negative allowances.
- 2 Name various pattern materials with relative merits.
- 3 Are risers employed in die casting? Can sand cores be used.
- 4 What is the function of resin in shell moulding?
- 5 What is Arc blow? How do you control it?
- 6 What do you understand by 7018 electrode?
- 7 Briefly explain the principle of thermit welding.
- 8 What is the cause and remedy for i) blow holes ii) hot tears iii) porosity
- 9 Sketch cross-section of wire drawing die and state die materials.
- 10 Differentiate between blanking and piercing.

PART – B (5 x 10 = 50 Marks)

- 11 a) What are the properties of moulding sand? Explain in detail. 5
b) What is a riser? What is a best shape? How are the risers designed and placed? 5
- 12 a) Explain the true centrifugal casting process with help of a neat sketch. Why it is called true? 5
b) Differentiate between extrusion and thermoforming of plastics. 5
- 13 a) Explain the process and advantages of submerged arc welding with help of sketch. 5
b) Differentiate between GTAW and GMAW in terms of principle electrode used and applications. 5
- 14 a) Discuss the salient features of electro beam welding process. Give its merits and applications. 5
b) Distinguish between friction welding and resistance butt welding. 5
- 15 a) Define hot working and cold working. Give its advantages and disadvantages. 5
b) Explain electro-hydraulic forming process with aid of neat sketch. Tubes can be formed by method. 5
- 16 a) Explain the principle and limitations of explosive forming technique. 5
b) What are the types of flames produced in gas welding? Explain in detail. 5
- 17 Write short notes on any three of the following : 10
a) Deep drawing and spinning b) Projection welding c) Yield criteria
d) Cupola furnace e) Types of cores
