

Code: 9A03403

R09

B.Tech II Year II Semester (R09) Supplementary Examinations May/June 2016

MANUFACTURING TECHNOLOGY

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the Parting line gate and Bottom gate with sketches and their advantages and disadvantages.
(b) Explain the functions of Runner extension in a Gating system.
- 2 (a) Explain the feeding range of risers with sketch.
(b) Explain the centrifuging centrifugal casting process with sketch.
- 3 (a) Explain the Volt-ampere (V-I) characteristics of welding power source.
(b) What are the applications and advantages of explosive welding?
- 4 (a) What is destructive testing of materials? Explain.
(b) What are the advantages of the Free bend tests over the guided bend tests?
(c) Why are reduced section test specimens used in testing? Explain.
- 5 (a) Why porosity is largely eliminated when metal is hot worked?
(b) Describe the difference between bars of steel finished by cold working and hot working processes.
- 6 (a) What are the steps in the preparation of rod before wire drawing?
(b) Explain the wire drawing equipment with neat diagram. What are the materials of the drawing dies?
- 7 (a) Describe the process of hot extrusion of tubes.
(b) Differentiate hot and cold forging. Give their relative merits and limitations.
- 8 (a) Describe the ECM process giving their areas of applications.
(b) Explain the concept of rapid prototype manufacturing.
