

Code No: 153BR**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech II Year I Semester Examinations, October - 2020****PRODUCTION TECHNOLOGY****(Mechanical Engineering)****Time: 2 hours****Max. Marks: 75****Answer any five questions****All questions carry equal marks**

- 1.a) What are the desired properties of moulding sand.
b) Discuss the working principle and applications of centrifugal casting. [7+8]
- 2.a) What are the principles and design of gating system.
b) What are the casting defects and its remedies? [8+7]
- 3.a) What is the principle behind oxyfuel gas cutting operation.
b) What are the components and its functions of the submerged arc welding equipment? [7+8]
- 4.a) How does thermit welding operation works and discuss its application?
b) Discuss the principle of resistance welding and the sequence takes place in the spot welding operation. [7+8]
- 5.a) Discuss the characteristic features of MIG welding process.
b) What are the various heating methods used in brazing process? [7+8]
- 6.a) How the microstructure of the base metal is influenced in head affected zone in any welding operation?
b) Describe the working principle of laser welding process. [8+7]
- 7.a) Derive the drawing force required to reduce the cross sectional areas.
b) What are the various rolling operations for getting different products? [7+8]
- 8.a) What are the principles of explosive forming?
b) Discuss the hydrostatic extrusion and its applications. [7+8]

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