

**Code No: 124DM****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech II Year II Semester Examinations, December - 2017****PRODUCTION TECHNOLOGY****(Common to ME, MCT, AME, MSNT)****Time: 3 Hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b, c as sub questions.

**PART- A****(25 Marks)**

- 1.a) What materials are used for moulding sand? [2]
- b) What is pressurized gating ratio? [3]
- c) What is the difference in design of torch tips in gas welding and gas cutting? [2]
- d) Mild steel can be welded by which flame of oxy acetylene welding and why? [3]
- e) What are the different ways by which the metal is transferred in gas metal arc welding? [2]
- f) What are the advantages of laser beam welding? [3]
- g) What is strain hardening? [2]
- h) Explain the coining and embossing operations. [3]
- i) What is fullering operation? [2]
- j) Differentiate drop and press forging. [3]

**PART-B****(50 Marks)**

- 2.a) What are the types of gates used in the casting process?
- b) What are the advantages of centrifugal casting as compared to other conventional methods of casting? [5+5]

**OR**

- 3.a) How chills and pads help in directional solidification?
- b) What process is followed in shell moulding process? [3+7]
- 4.a) Differentiate DCRP and DCSP.
- b) What purpose is served by coatings on the electrode during welding operation and what are the coating materials used? [5+5]

**OR**

- 5.a) Explain forge welding operation and its limitations.
- b) How the heat energy is used in thermit welding process? [3+7]

- 6.a) Discuss any one non destructive testing of welds.  
b) Distinguish soldering and brazing process and also state its applications. [5+5]
- OR**
- 7.a) Explain induction welding operation.  
b) Explain diffusion welding operation with its applications. [3+7]
- 8.a) What are the various roll pass sequences?  
b) Explain the sequences used in wire and tube drawing operations. [5+5]
- OR**
- 9.a) Differentiate hot and cold spinning.  
b) Discuss the mechanics used in finding the angle of bite of the rolling operation. [3+7]
10. What are the various stages encountered in drop forging of lever. [10]
- OR**
- 11.a) What is impact extrusion?  
b) Distinguish the forward and backward extrusion process. [3+7]

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