

R13

Code No: 114DM

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year II Semester Examinations, October/November - 2016

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) Describe repair methods used for casting. [2]
- b) Write different types of patterns. [3]
- c) Why weld should be panned with a hammer? [2]
- d) What are the safety precautions observed in welding? [3]
- e) What is soldering process? [2]
- f) Write short note on explosive welding. [3]
- g) What are wrought products? Define. [2]
- h) What is angle bite? What is value of bite angle for various materials in rolling operations? [3]
- i) Define extrusion. [2]
- j) What are defects in forged parts. [3]

PART – B**(50 Marks)**

- 2.a) What is the purpose of sand conditioning equipment? Name several machines of this purpose indicating the specific purpose each.
- b) Give the steps in sand casting process and explain each briefly. [5+5]

OR

- 3.a) List several ways to clean casting surfaces, also write advantages and disadvantages of each.
- b) Describe centrifugal casting process and to what work piece configuration it is best suited. [5+5]

- 4.a) Explain the inert-gas metal arc welding. How does it differ from metal arc welding?
- b) What are the advantages and disadvantages of D.C and A.C welding? [5+5]

OR

- 5.a) Draw diagram showing classification of welding process.
- b) Write difference between Arc welding and forge welding. [5+5]
- 6.a) Explain explosive welding with neat diagram.
- b) Explain the mechanism of metal transfer in MIG/MAG welding. [5+5]

OR

- 7.a) Explain destructive and non-destructive testing of welds.
- b) Write difference between friction welding and induction welding. [5+5]

- 8.a) Explain the principle of stretch forming. What are its advantages and limitations?
b) Describe the process of metal spinning and tools used for spinning. [5+5]

OR

- 9.a) What are the main characteristics of hot working as compared with cold working processes?
b) What are different types of drawing? Explain each with a help of neat sketch. [5+5]

- 10.a) Explain forging operations and its principles.
b) Explain briefly terms backing and lapping as related to forging practice. [5+5]

OR

- 11.a) Write the difference between forward extrusion and backward extrusion.
b) Explain the forces in extrusion. [5+5]

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