

Code No: 114DM

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech II Year II Semester Examinations, November/December - 2015**  
**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) | State the various defects in casting processes.                     | [2M] |
| b)   | What are the materials generally used for preparing patterns?       | [3M] |
| c)   | What is neutral flame? Write down its temperature.                  | [2M] |
| d)   | List out the advantages of gas welding?                             | [3M] |
| e)   | Write short notes on heat affected zone in welding.                 | [2M] |
| f)   | State the different welding defects.                                | [3M] |
| g)   | Give list of some cold working processes?                           | [2M] |
| h)   | What are the advantages and disadvantages of hot working processes? | [3M] |
| i)   | Write short notes on forward extrusion process?                     | [2M] |
| j)   | Explain about smith forging?  | [3M] |

**PART-B**

(50 Marks)

- |           |   |         |
|-----------|---|---------|
| 2.a)      | Define the following terms as related to casting,<br>i) Cope      ii) Drag      iii) bottom board                       |         |
| b)        | Briefly explain the procedure to be followed for making a sand mould.   |         |
| c)        | Briefly discuss draft allowance is important for patterns.  | [3+3+4] |
| <b>OR</b> |   |         |
| 3.a)      | Describe the types of risers and their uses with suitable sketches.   |         |
| b)        | Specify the advantages of the precision investment casting process over the other casting processes.                    |         |
| c)        | Is it possible to obtain a sound casting of a solid bar by centrifugal casting? Give reasons in support of your answer. | [3+3+4] |
| 4.a)      | Explain the classification of welding processes.  |         |
| b)        | What is brazing? Describe briefly two methods of brazing.   | [5+5]   |
| <b>OR</b> |   |         |
| 5.a)      | Explain the types of welded joints.   |         |
| b)        | Write short notes on the following.<br>i) Gas cutting      ii) Soldering  | [5+5]   |
| 6.a)      | Briefly explain the Inert Gas welding.  |         |
| b)        | Briefly explain the Induction welding.  | [5+5]   |

**OR**

7.a) Briefly explain the TIG welding. [5+5]  
b) Briefly explain the Explosive welding.

8.a) Write the advantages and disadvantages of forging? [5+5]  
b) Explain the following terms,  
i) Stamping ii) forming

OR

9.a) Write short notes on rolling stand arrangement? [5+5]  
b) Explain the following terms,  
i) Blanking ii) piercing

10.a) Write advantages and limitations of extrusion processes. [5+5]  
b) Explain the following processes,  
i) Pipe making ii) Hydrostatic extrusion

OR

11.a) Write comparison between forward and backward extrusion processes. [5+5]  
b) Explain various forging operations.

