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Manufacturing method

First half

1. Describe the various types of flames that can be produced in oxy-acetylene flame welding with temperature advantage and disadvantage

or

Describe the factors for selecting right kind of Electrode for a particular welding joint. 71/2

2. Answer any two

5x2

- (a) What do you understand by second invariant of stress deviator?
- (b) Describe the various types of forming processes with suitable sketch
- (c) Show the different forces acting in the case of deformation through a wedge shaped die.

SECOND HALF

- 4.a) Describe with sketch the following operations in drilling machine;
 (i) Counter boring (ii) Counter sinking (iii) Reaming and (iv) Tapping
 - b) Briefly describe the machining process in a horizontal milling machine [4 1/2]
- 5. a) Draw a 'Lathe Machine' showing its major components and briefly explain their [8] functions.
- b) Illustrate with sketch three components showing different operations on a lathe $\begin{bmatrix} 4 & 1/2 \end{bmatrix}$ machine
- 6. Write notes on any two:

[12 1/2]

- i) Electro Discharge Machining
- ii) Injection Moulding of thermoplastics
- iii) Calculation of machining time for 'Turning'
- iv) Manufacturing process in shaping machine