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Question Paper Code: AME006



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular) - May, 2018

Regulation: IARE – R16

Production Technology

Time: 3 Hours

(ME)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) List the functions of various types of pattern and explain the difference between pattern and casting. [7M]

(b) Sketch and explain briefly about cope and drag pattern and match plate pattern [7M]
- (a) Explain the casting process, list the advantages and disadvantages over the other manufacturing process. [7M]

(b) With the help of cooling curves, discuss the solidification process of pure metals and alloys. [7M]

UNIT – II

- (a) Describe the reaction that takes place in an oxyfuel gas torch. Mention the different types of flames and their characteristics. [7M]

(b) What is the principle of thermit welding. Explain briefly about thermit welding with a neat sketch. [7M]
- (a) Explain the features of neutral, reducing and oxidizing flames with a neat sketch. [7M]

(b) Explain about plasma arc welding with a neat sketch and write its applications. [7M]

UNIT – III

- (a) Explain about the Laser beam welding process with a neat diagram. [7M]

(b) List the different types of destructive and nondestructive tests to be done on welds with a neat sketch and explain any one type of destructive testing. [7M]
- (a) Discuss the causes and remedies of various welding defects with the help of a neat diagram. [7M]

(b) Explain about non-destructive testing process used to inspect welds. [7M]

UNIT – IV

- (a) What is forming? How forming is different from other manufacturing process. Mention their advantages and disadvantages [7M]

(b) With the help of a neat sketch, explain any two rolling mills used for rolling of metals. [7M]

8. (a) With the help of a neat sketch explain blanking, piercing, bending and mention their applications. [7M]
- (b) Explain the process of tube drawing with a neat sketch and also differentiate between wire and tube drawing. [7M]

UNIT – V

9. (a) With a neat sketch explain hydrostatic extrusion process and their applications. [7M]
- (b) Indirect extrusion requires less power than the direct extrusion processes explain why? Also explain these type of extrusion with neat sketch. [7M]
10. (a) Define forging operation with a neat sketch and explain different types of forging operations. [7M]
- (b) Explain briefly with a neat diagram about gravity drop hammer with their applications. [7M]

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