

Roll No.

Total Pages : 2

BT-7/M-13

8754

**ADVANCED MANUFACTURING
TECHNOLOGY**

Paper-ME-419-E

Option-I

Time Allowed : 3 Hours]

[Maximum Marks : 100

Note : Attempt five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

UNIT-I

1. Describe various surface cleaning and surface treatment methods used in Industries. 20
2. What are different types of composite materials? Briefly enumerate the properties and applications of each type. 20

UNIT-II

3. (a) What is meant by polymerization? Describe various additions to polymers. 10
- (b) Describe with neat sketch the Transfer moulding process used in plastic processing. 10
4. Describe following methods of thread manufacturing:
 - (a) Thread Rolling. 10
 - (b) Thread Milling. 10

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UNIT-III

5. (a) Discuss with sketches various types of extrusion processes giving advantages and limitations of each process. 10
- (b) Discuss the effects of Temperature, Strain Rate and Friction on metal forming processes. 10
6. Explain the following processes in detail :
 - (a) Rolling 5
 - (b) Power rolling 5
 - (c) Drawing 5
 - (d) Die forging. 5

UNIT-IV

7. (a) Discuss the common forms in which die casting dies are designed. 10
- (b) Enumerate the specific features required to be embodied in a successful design of die casting dies. 10
8. What are the important elements of Cost estimation? Also enumerate the major steps and factors in cost estimation. 20

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