

Roll No. ....

Total Pages : 02

BT-7/D-1.9

37058

ADVANCED MANUFACTURING  
TECHNOLOGY  
ME-419E

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt Five questions in all selecting at least one question from each Unit.

Unit I

1. (a) What is Electroforming ? Explain its principle and give some applications. 12
- (b) Write a note on surface coating for tooling. 8
2. Write notes on the following :
  - (a) Fabrication of Reinforced Composite 8
  - (b) Machining and Joining of Composites. 12

Unit II

3. (a) What is a Polymer ? Explain polymerization and addition of Polymers with examples. 10
- (b) What is the principle of Transfer Moulding ? List some industrial uses. 10

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4. (a) Write a detailed note on Die Threading and Tapping. 12
- (b) Explain the "Three Wire Method" of checking the pitch diameter of a screw. 8

Unit III

5. (a) Differentiate between hot working and cold working in metal forming. Bring out the advantages and disadvantages of each of these techniques. 10
- (b) Discuss the effects of temperature, strain rate and friction on metal forming process. 10
6. (a) What is meant by conventional rolling and powder rolling ? Explain the terms no slip point, backward slip, forward slip and draft in relation to rolling. 12
- (b) Derive a suitable expression for draw stress in frictionless wire drawing process. 8

Unit IV

7. Write notes on the following :
  - (a) Hot chamber die casting machine 10
  - (b) Die lubrication and coating. 10
8. (a) Give general relationships for calculating machining times in Turning, Drilling, Facing and Shaping. 12
- (b) List the various steps of cost estimating. 8

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