

BT-7 / M-19
ADVANCED MANUFACTURING
TECHNOLOGY
Paper-ME-429N

*Time allowed : 3 hours]**[Maximum marks : 75*

Note : Attempt only five questions, selecting at least one question from each unit.

Unit-I

1. (a) Describe various types of surface cleaning and surface treatment methods. 8
- (b) Discuss the advantages, limitations and applications of Electroforming process. 7
2. (a) What do you mean by composite ? How composites are different from alloys ? Enumerate various applications of composite materials. 8
- (b) Explain the fabrication processes used for making particulate composites. 7

Unit-II

3. (a) Differentiate between Thermosetting polymers and Thermoplastic polymers. What is the role of additives in these polymers ? 8
- (b) Illustrate Compression Moulding process with Neat Sketch. 7

4. Describe the followign processes :

- | | |
|--------------------|---|
| (a) Thread Chasing | 5 |
| (b) Tapping | 5 |
| (c) Thread Milling | 5 |

Unit-III

5. Illustrate the effect of various variables on the mechanical working processes. Describe the advantages and limitations of Hot working and cold working processes. 15

6. Explain with neat sketches working and application of the following processes in detail :

- | | |
|-------------------|---|
| (a) Drawing | 8 |
| (b) Power Rolling | 7 |

Unit-IV

7. Illustrate with neat sketches the working of Hot chamber die casting machine. Describe various factors involved in the design of Die casting dies. 15

8. What are the important methods of 'cost estimation' ? Also enumerate the major steps and chief factors in cost estimating ? 15