

**CODE: 17CD03103**

M. Tech I Year I Semester Regular Examinations, February 2018

**ADVANCES IN MANUFACTURING TECHNOLOGY  
(CAD/CAM)**

Time : 3 hours

Max Marks : 60

Answer all **five** units. (5 x 12 = 60 Marks)

**UNIT-I**

1. (a) Provide an overview of conversion coating or plating process.
- (b) Explain phosphate coatings and chromate coatings.

OR

2. (a) Explain the Evaporation and Sputtering types of physical vapor deposition.
- (b) What is chemical vapor deposition process? State its applications.

**UNIT-II**

3. (a) What is abrasive jet machining? Explain the process with the help of a neat diagram.
- (b) What are the different types of AJM nozzles? Give their classification.

OR

4. (a) Sketch and explain the important components of an ultrasonic machine.
- (b) Explain the process parameters of ultrasonic machining.

**UNIT-III**

5. (a) State the advantages and limitations of electro chemical machining.
- (b) What are the operations in which ECM is most commonly used?

OR

6. (a) Show the schematic of wire cut EDM.
- (b) Explain the process of material removal in wire cut EDM.

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**UNIT-IV**

7. (a) With a neat sketch of electron beam machining and explain its principle.  
(b) Explain the applications of electron beam machining.

OR

8. (a) With a neat sketch, explain the working principle of Plasma Arc Machining.  
(b) State the advantages of Plasma Arc Machining.

**UNIT-V**

9. (a) State the Advantages of Laser Beam Machining.  
(b) What are the applications of Laser Beam Machining.

OR

10. Provide a Schematic illustration of the laser-beam machining process. Explain the same.

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