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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)  
M.Tech I year II Semester Regular Examinations June 2019  
ADVANCES IN MANUFACTURING TECHNOLOGY  
(CAD&CAM)**

**Time: 3 hours**

**Max. Marks:60**

**(Answer all Five Units 5×12=60 Marks)**

**UNIT I**

- 1 a Explain Non-Destructive Testing. Also name various types of NDT techniques. **6M**  
b Briefly explain liquid penetration test along with the suitable sketch. **6M**

**OR**

- 2 Explain in detail about the mechanical coating processes. **12M**

**UNIT II**

- 3 a Explain the accuracy and surface finish process characteristics of AJM process. **8M**  
b What are the various AJM elements influencing AJM process? **4M**

**OR**

- 4 a What is meant by ultrasonic machining? **2M**  
b Explain the working process of ultrasonic machining with suitable sketch. **10M**

**UNIT III**

- 5 Explain the Material removal rate (MRR), Accuracy and Surface finish of Electro Chemical Machining process characteristics. **12 M**

**OR**

- 6 Discuss the schematic illustration of the electrical-discharge wire cutting process. **12 M**

**UNIT IV**

- 7 Describe the process characteristics of electron beam machining. **12 M**

**OR**

- 8 Discuss in detail about the working principle of laser beam machining. **12 M**

**UNIT V**

- 9 Discuss the process, material, advantages, and limitations of stereo lithography. **12 M**

**OR**

- 10 Discuss the fabrication of nano tubes, advantages of nano tubes, and its mechanical properties. **12 M**

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