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10ME665

**Sixth Semester B.E. Degree Examination, Dec.2016/Jan.2017**  
**Non-Traditional Machining**

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting  
at least TWO questions from each part.**

**PART – A**

- 1 a. Write history about Non-Traditional machining. (06 Marks)  
b. Briefly explain the classifications of NTM. (08 Marks)  
c. Differentiate between conventional and non conventional processes. (06 Marks)
- 2 a. List and explain the effects of process parameters on MRR as applied to USM. (08 Marks)  
b. Sketch and explain the tool feed mechanism used in USM. (06 Marks)  
c. Discuss applications, advantages and disadvantages of USM. (06 Marks)
- 3 a. Discuss the variables in Abrasive Jet Machining. (04 Marks)  
b. Sketch and explain the working of AJM. (08 Marks)  
c. With neat figure explain Water jet machining process. (08 Marks)
- 4 a. Illustrate Electrochemical machining process. (06 Marks)  
b. Discuss ECM tooling technique with example. (06 Marks)  
c. Sketch and explain Electrochemical grinding and honing. (08 Marks)

**PART – B**

- 5 a. What is chemical machining? Explain with sketches the steps involved in chemical blanking. (10 Marks)  
b. What is meant by Hydrogen embrittlement? (05 Marks)  
c. List the advantages and disadvantages of CHM. (05 Marks)
- 6 a. Sketch and explain EDM process. (08 Marks)  
b. Discuss the requirement of flushing in EDM process. (06 Marks)  
c. Illustrate EDM grinding. (06 Marks)
- 7 a. Discuss the equipments used in plasma arc machining. (06 Marks)  
b. List and explain PAM parameters. (06 Marks)  
c. Write applications, advantages and limitations of PAM. (08 Marks)
- 8 a. Draw neat figure and explain Laser beam machining. (08 Marks)  
b. Sketch and explain Electron beam machining. (08 Marks)  
c. Mention applications, advantages and limitations of EBM. (04 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.