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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

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|---|---|------------|
| 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

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|---|---|------------|
| 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.