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10ME665

Sixth Semester B.E. Degree Examination, Dec.2013 / Jan. 2014
Non – Traditional Machining

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO question from each part.

PART – A

- 1 a. What is NTM? Classify the NTM processes. (07 Marks)
b. Compare and contrast between traditional and non – transitional machining processes. (07 Marks)
c. List the factors influencing process selection and explain any two. (06 Marks)
- 2 a. Write a note on process capability of USM. (06 Marks)
b. With a neat figure, explain tool feed system used in USM. (06 Marks)
c. Discuss the effects of: i) Grain size ii) Amplitude and frequency of vibration
iii) Applied static load iv) Slurry on MRR in USM. (08 Marks)
- 3 a. Explain the variables that influence MRR and accuracy in AJM. (10 Marks)
b. What are the advantages and applications of WJM? (06 Marks)
c. Explain AJM mechanics. (04 Marks)
- 4 a. Describe various process parameters affecting ECM. (10 Marks)
b. Differentiate ECG with conventional grinding. (05 Marks)
c. With a neat sketch, explain electro – chemical Honing. (05 Marks)

PART – B

- 5 a. List the factors affecting the selection of Maskants and Etchants. (10 Marks)
b. Explain the sequence of operations in chemical blanking. (06 Marks)
c. List the functions of electrolyte. (04 Marks)
- 6 a. Explain flushing. Enumerate any 2 methods of flushing used in EDM. (10 Marks)
b. With a figure, explain the mechanism of material removal in EDM. (06 Marks)
c. List the advantages and applications of EDM. (04 Marks)
- 7 a. With a neat sketch, explain the principle of PAM. (10 Marks)
b. List out the advantages, disadvantages and applications of PAM. (10 Marks)
- 8 a. With a neat sketch, explain the mechanism of metal removal in LBM. (10 Marks)
b. With a neat figure, explain the principle of EBM. (10 Marks)

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.