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15MR663

Sixth Semester B.E. Degree Examination, June/July 2019 Non Traditional Machining

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. List the difference between Traditional and Non – traditional machining process. (06 Marks)
b. With a neat sketch, explain the working principle of ultra sonic machining process. (10 Marks)

OR

- 2 a. Explain the process parameters of ultra sonic machining process. (10 Marks)
b. Mention the advantages and dis – advantages of ultra sonic machining process. (06 Marks)

Module-2

- 3 a. List the advantages , disadvantages and applications of abrasive jet machining process. (09 Marks)
b. List the parameters which affect material removal rate in abrasive jet machining process. Explain stand – off distance and size of abrasive gain. (07 Marks)

OR

- 4 a. With the help of a sketch, explain the water jet machining process. (10 Marks)
b. Explain the process characteristics , material removal rate and nozzle wear in abrasive jet machining process. (06 Marks)

Module-3

- 5 a. With a neat sketch, explain chemical machining process. (07 Marks)
b. List the advantages , disadvantages and applications of Electro chemical machining process. (09 Marks)

OR

- 6 a. Write a note on Maskants and Etchants in chemical machining process. (08 Marks)
b. With the help of a sketch, explain Electro chemical Grinding and Electrochemical Honing process. (08 Marks)

Module-4

- 7 a. List the advantages , disadvantages and applications of electrical discharge machining process. (09 Marks)
b. Explain the following applied to Electrical discharge machining process : (07 Marks)
i) Di - Electric Fluid ii) Spark Generation.

OR

- 8 a. Explain briefly, Electrical discharge machining process characteristics. (08 Marks)
b. Explain the Pressure Flushing and suction Flushing in Electrical Discharge machining process. (08 Marks)

Module-5

- 9 a. Sketch and explain any one type of Plasma torch. (09 Marks)
b. Explain the Plasma Arc machining process parameters that govern the performance. (07 Marks)

OR

- 10 a. With a neat sketch, explain Electron Beam machining process. (10 Marks)
b. Mention the advantages and disadvantages of Laser Beam machining. (06 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.