

CBCS SCHEME

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15MA742

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.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. Briefly explain the need for non-traditional machining process. (08 Marks)
b. Distinguish between traditional and non-traditional machining process. (08 Marks)

OR

- 2 a. Classify non-traditional machining process based on nature of energy. (08 Marks)
b. Explain the advantages, limitations and applications of non-traditional machining process. (08 Marks)

Module-2

- 3 a. Explain the effect of slurry, tool and work material in ultrasonic machining. (08 Marks)
b. Explain the applications, advantages and limitations of USM. (08 Marks)

OR

- 4 a. Explain the process variables involved in Abrasive jet machining. (08 Marks)
b. Explain the equipment and process involved in water jet machining. (08 Marks)

Module-3

- 5 a. Explain the elements of Electro chemical machining process. (08 Marks)
b. Explain the chemistry of the process in Electrochemical machining. (08 Marks)

OR

- 6 a. With neat sketch, explain Electro chemical Honing process. (08 Marks)
b. Explain the elements of process in chemical machining. (08 Marks)

Module-4

- 7 a. Explain the mechanism of mutual removal in Electrical discharge machining. (08 Marks)
b. What is Flushing? Explain the types of flushing in Electrical discharge machining. (08 Marks)

OR

- 8 a. Explain the principle of Plasma generation in Plasma Arc Machining (PAM). (08 Marks)
b. Briefly explain the mechanism of metal removal in plasma Arc machining. (04 Marks)
c. Briefly explain the safety precautions to be taken in PAM (04 Marks)

Module-5

- 9 a. Explain the mechanism of metal removal in Laser Beam Machining (LBM). (08 Marks)
b. Explain the advantages and limitation of LBM. (08 Marks)

OR

- 10 a. Explain the generation and control of electron beam in Electron Beam machining. (08 Marks)
b. Explain the application, advantages and limitation of Electron Beam Machining. (08 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.