

USN

--	--	--	--	--	--	--	--	--	--

18MCM242

Second Semester M.Tech. Degree Examination, June/July 2019 Non-Traditional Machining

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. With the help of a graph of removal rate Vs power, explain the comparative study of modern machining processes. (10 Marks)
b. What are the elements of ultrasonic machining process? Explain. (10 Marks)

OR

- 2 a. Explain with neat sketches of the tool feed mechanism in ultrasonic machining process. (10 Marks)
b. Write the advantages, disadvantages and applications of Abrasive jet machining. (10 Marks)

Module-2

- 3 a. Describe briefly the water jet cutting equipments. (10 Marks)
b. Classify the electric discharge machining processes and explain them with neat sketches. (10 Marks)

OR

- 4 a. What are the advantages and applications of water jet machining? (10 Marks)
b. Explain electrical parameters in R-C circuit of EDM process. (10 Marks)

Module-3

- 5 a. With the help of a figure describe the chemistry involved in electro chemical machining process. (10 Marks)
b. Write the advantages, disadvantages and applications of ECM process. (10 Marks)

OR

- 6 a. What are the elements of ECM process? Explain. (10 Marks)
b. What are the functions and essential properties of electrolyte used in ECM process? (10 Marks)

Module-4

- 7 a. What are the advantages and disadvantages and applications of chemical machining process? (10 Marks)
b. With the help of a schematic diagram explain generation of control of electron beam. (10 Marks)

OR

- 8 a. With the figure explain the principle of Plasma generation. (10 Marks)
b. Describe the thermal and non-thermal types of electron beam machining. (10 Marks)

Module-5

- 9 a. Explain the mechanism of metal removal and thermal features of laser beam machining. (10 Marks)
b. What are the advantages and applications of Ion beam machining? (10 Marks)

OR

- 10 a. What are the types of high velocity forming methods? Explain. (10 Marks)
b. Write the advantages and limitations of laser beam machining. (10 Marks)

* * * * *