

# CBCS SCHEME

17ME554



USN

## Fifth Semester B.E. Degree Examination, July/August 2022 Non-Traditional Machining

Max. Marks: 100

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

### Module-1

- 1 a. Compare the traditional machining with Non-Traditional Machining process. (08 Marks)  
b. With neat sketch, explain operation of Ultra Sonic Machining (USM). (12 Marks)

OR

- 2 a. With neat sketch explain equipment of Water Jet Machining. (12 Marks)  
b. List out specific advantages, limitations and applications of NTM. (08 Marks)

### Module-2

- 3 a. Explain process characteristics of USM. (08 Marks)  
b. List out advantages, limitations and applications of Water Jet Machining. (12 Marks)

OR

- 4 a. With neat sketch, explain operation of Water Jet Machining (WJM). (08 Marks)  
b. With neat sketch, explain equipment and operation of AJM. (12 Marks)

### Module-3

- 5 a. With neat sketch, explain equipment of electrochemical machining. (12 Marks)  
b. Explain with a graph the effect of various process parameter on MRR in ECM. (08 Marks)

OR

- 6 a. Explain element of chemical machining process. (08 Marks)  
b. Explain with neat sketch chemical blanking process. (12 Marks)

### Module-4

- 7 a. With neat sketch, explain heat affected zone in EDM process. (08 Marks)  
b. With neat sketch, explain operation of Plasma Arc Machining (PAM). (12 Marks)

OR

- 8 a. Explain the safety precaution in Pam and mention the advantages, limitations and applications in PAM. (10 Marks)  
b. With neat sketch explain different methods of flushing. (10 Marks)

### Module-5

- 9 a. With neat sketch, explain equipment of Laser Beam Machining (LBM). (12 Marks)  
b. Explain process parameters of EBM. (08 Marks)

OR

- 10 a. With neat sketch explain equipment of EBM. (12 Marks)  
b. With neat sketch, explain any one types of Laser used in LBM. (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.

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