

22601

M. Tech. 1st Semester (M.E.) (CBCS Scheme)

Examination, November-2023

MICRO MACHINING PROCESS

Paper-MTME21C1

Time allowed : 3 hours]

[Maximum marks : 100

**Note:** *Question No. 1 is compulsory. Attempt total five questions selecting one question from each unit. All questions carry equal marks.*

1. (a) Explain Electro chemical Grinding. 5
- (b) How the process parameters effect the surface finish? 5
- (c) Explain Honing. 5
- (d) Material for MEMS 5

**Unit-I**

2. (a) What are various advantages of Non-Conventional Machining Process? 10
- (b) What are the various types of Non-Conventional Machining Process? 10
3. (a) What is the difference between Conventional and New technologies in Machining? 10
- (b) What are the various applications of Micro machining Process? 10

**Unit-II**

4. Explain the following:
- (a) Mechanical Transducers 10
  - (b) Optical Transducers 10
5. Explain Micro Electro Mechanical System? 20

**Unit-III**

6. Explain working Principle of ultrasonic machining with neat and clean sketch. 20
7. Explain Electrochemical Machining with neat and clean sketch 20

**Unit-IV**

8. Explain Electro discharge Machine with neat sketch and what are the various process of parameters involved in the process. 20
9. (a) Explain wire EDM process variables. 10
- (b) Criteria for selecting tool material for EDM 10