



IV SEMESTER B. TECH (IP ENGG.) END SEMESTER MAKE UP EXAMINATIONS JUNE 2019

SUBJECT: NON CONVENTIONAL MANUFACTURING TECHNIQUES [MME 2212]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

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| 1A. | Sketch and explain the processing technique used to manufacture | 04 |
| | a) Bottles | |
| | b) Containers | |
| 1B. | Derive an expression for material removal in ultrasonic machining. | 04 |
| 1C. | Explain the need for non-conventional machining process. | 02 |
| 2A. | With a neat sketch explain electron beam machining. | 04 |
| 2B. | Sketch and explain laser beam machining. | 04 |
| 2C. | Sketch and explain wire electric discharge machining. | 02 |
| 3A. | With a neat sketch explain plasma arc machining. | 04 |
| 3B. | Explain with sketch ion beam machining. | 04 |
| 3C. | Write a short note on thermal energy deburring. | 02 |
| 4A. | Sketch and explain injection molding | 04 |
| 4B. | Derive an expression for material removal in abrasive water jet machining. | 04 |
| 4C. | Write a short note on thermo plastics. | 02 |
| 5A. | What are the advantages, disadvantages and applications of | 04 |
| | abrasive water jet machining. | |
| 5B. | Sketch and explain shaped tool electrolytic machining | 04 |
| 5C. | Write a short note on polymerization. | 02 |