



IV SEMESTER B. TECH (IP ENGG.) END SEMESTER EXAMINATIONS APRIL 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) Bumpers | |
| | b) Nesting Pallets | |
| 1B. | Derive an expression for horn design in ultrasonic machining | 04 |
| 1C. | Differentiate between conventional and non-conventional machining processes. | 02 |
| 2A. | With a neat sketch explain electric discharge grinding and electro chemical drilling. | 04 |
| 2B. | Sketch and explain the machining process used for drilling synthetic jewels in the watch industry. | 04 |
| 2C. | Differentiate between injection molding and blow molding. | 02 |
| 3A. | With a neat sketch explain laser beam machining and plasma arc machining. | 04 |
| 3B. | Explain thermal energy deburring and chemical machining. | 04 |
| 3C. | Write a short note on elastomers. | 02 |
| 4A. | Sketch and explain transfer Molding and casting. | 04 |
| 4B. | Derive an expression for material removal in abrasive water jet machining. | 04 |
| 4C. | Differentiate between thermo settings and thermo Plastics. | 02 |
| 5A. | What are the advantages, disadvantages and applications of Water Jet Machining? | 04 |
| 5B. | Sketch wire electric discharge machining and pulse generators. | 04 |
| 5C. | Write a short note on biodegradable plastics. | 02 |