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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

IV SEMESTER B.TECH. (INDUSTRIAL AND PRODUCTION ENGINEERING)

END SEMESTER MAKE UP EXAMINATIONS, JUNE 2018

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 suitable assumed.

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| 1A. | Explain Non Conventional machining Process | 3 |
| 1B. | Explain with sketch Electric Discharge Grinding | 4 |
| 1C. | Explain with sketch Electro chemical grinding | 3 |
| | Explain the following processes | |
| 2A. | i) Reaction Injection Molding | 5 |
| | ii) Plastics | |
| 2B. | Explain need for development of non Traditional machining techniques | 2 |
| 2C. | Derive an expression for material removal model for Ductile material in Abrasive jet machining | 3 |
| 3A. | With neat sketches explain Shaped Tool Electrolytic Machining | 5 |
| 3B. | Explain Etchants and Maskents | 2 |
| 3C. | Differentiate between thermo plastics and thermo setting plastics | 3 |
| 4A. | Explain with sketch Electro Chemical Drilling | 4 |
| 4B. | Explain Nozzle Materials in Abrasive Jet Machining | 3 |
| 4C. | Explain with sketch Laser beam machining | 3 |
| 5A. | Write a note on following | |
| | i) Electro chemical Equivalent of alloys | |
| | ii) Solid Laser | 10 |
| | iii) Nitrile Rubbers | |
| | iv) Thermo Forming | |
| | v) Casting | |