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**IV SEMESTER B.TECH. (INDUSTRIAL AND PRODUCTION ENGINEERING)
END SEMESTER EXAMINATIONS, APRIL/MAY 2017**

**SUBJECT: NON CONVENTIONAL MANUFACTURING TECHNIQUES
[MME 2212]**

**REVISED CREDIT SYSTEM
(19/04/2017)**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** Derive an expression for the following processes
- i) Hydrodynamics of Electro chemical machining process **5**
 - ii) Design of Horn (Velocity Transformer)
- 1B.** Explain Elastomers **2**
- 1C.** Explain with sketch Shaped Tube Electrolytic Machining **3**
- 2A.** Explain the following processes
- i) Vacuum forming **5**
 - ii) Injection Molding
- 2B.** Explain the need for development of non conventional machining techniques **2**
- 2C.** Derive an expression for material removal model for brittle material in Abrasive jet machining **3**
- 3A.** With neat sketches explain Ion beam machining and Electron beam machining **5**
- 3B.** Explain Electric discharge grinding **2**
- 3C.** Differentiate between thermo plastics and thermo setting plastics **3**
- 4A.** Explain with sketch Water jet machining and Electric discharge machining **5**
- 4B.** Draw the structure for addition polymerization **2**
- 4C.** Explain with sketch Laser beam machining **3**

5A. Write a note on following

- i) Chemical Milling
- ii) Plasma arc Cutting
- iii) Biodegradable plastics
- iv) Blow Molding
- v) Transfer Molding

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