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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



IV SEMESTER B.TECH (INDUSTRIAL & PRODUCTION ENGINEERING)

END SEMESTER EXAMINATIONS, MAY 2016

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.

- 1A. Compare the traditional machining with non-traditional machining processes (04)
- 1B. Explain the effect of various process parameters on material removal rate in Abrasive Jet Machining (04)
- 1C. List the different dielectric fluids used in Electric Discharge Machining? Also draw the sketches of various methods of flushing the fluid. (02)

- 2A. With a neat and labelled diagram explain the water jet machining (05)
- 2B. Derive equations for Material Removal Rate in Electrochemical Machining of pure metal and alloy (03)
- 2C. List the advantages, limitations and applications of Electrochemical grinding? (02)

- 3A. What are the advantages, limitations and applications of Laser Beam Machining? (03)
- 3B. Discuss the important factors influencing the selection of electrodes in EDM (03)
- 3C. Classify Maskants and Resists used in Chemical Machining. Explain any two (04)

- 4A. What are the general properties of plastics? With examples differentiate between thermoplastic and thermosetting plastics (04)
- 4B. With necessary sketches explain the mechanism of material removal in EBM (03)
- 4C. Sketch and explain any one type of plasma torch used in Plasma Arc cutting (03)

- 5A.** With a neat and labelled sketch explain Injection molding of plastics (04)
- 5B.** Explain with sketch the different phases in electrochemical grinding (04)
- 5C.** Differentiate between wire EDM and conventional EDM process (02)