

Code No: **RT41034****R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February/March - 2018****UNCONVENTIONAL MACHINING PROCESSES****(Mechanical Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

PART-A (22 Marks)

1. a) With the help of graph explain how the MRR changes with the grit size of abrasives. [4]
- b) How is electrochemical grinding superior to conventional grinding? [4]
- c) What the functions of dielectric fluid in EDM process? [4]
- d) State the mechanism of metal removal in Laser Beam machining process. [3]
- e) What are the PAM over oxy-acetylene cutting? [4]
- f) What the applications of shaped tube electrolytic machining? [3]

PART-B (3x16 = 48 Marks)

2. a) State the classification of nontraditional machining processes based on energy domain. [8]
- b) Explain Ultrasonic Machining process with a neat sketch. [8]
3. a) State the procedure for chemical milling along with its applications. [8]
- b) State the considerations of tool design for electrochemical machining and explain the functions of electrolyte. [8]
4. a) Explain Electro discharge Machining process with a neat sketch. [8]
- b) Explain about R-C circuit used for pulse generation in EDM process. [8]
5. a) State the merits, limitations, applications of electron beam and laser beam machining processes. [8]
- b) Explain about the process parameters influencing the electron beam machining process. [8]
6. a) Draw a neat sketch of plasma torch. Explain the process of generation of plasma. [8]
- b) State and explain about the parameters that influence PAM process. [8]
7. a) Explain Magnetic abrasive finishing process with its applications. [8]
- b) Explain the water jet machining process with a schematic diagram. [8]