

Code No: R41034

R10**Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018
UNCONVENTIONAL MACHINING PROCESSES
(Mechanical Engineering)

Time: 3 hours**Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

- 1 a) Compare and contrast the various unconventional machining process on the basis of type of energy employed, material removal rate, transfer media and economical aspects. [10]
b) Explain the advantages of Non-traditional machining processes. [5]
- 2 a) Sketch and describe any two types of tool feed systems in ultrasonic machining. [10]
b) Explain construction and working of USM. [5]
- 3 a) List out the five important variables of AJM process. Draw a sketch showing the effect of these variables on MRR. [10]
b) Describe at least two typical engineering applications of AWJM and WJM. [5]
- 4 a) What are the specific advantages of using electro chemical machining over chemical machining? Give some of the practical applications of electro chemical machining process. [8]
b) What is deburring process? Explain its significance. [7]
- 5 a) Explain the working principle and elements of wire cut EDM process. [8]
b) Explain the effect of dielectric fluids on surface finish in EDM process. [7]
- 6 a) Explain the principles and elements of EBM, also how the work table is protected from getting damaged by electron beam. [10]
b) Differentiate between EBM and LBM considering at least five aspects? [5]
- 7 a) Discuss the factors that influence the quality of the cut in plasma arc machining. [8]
b) Mention the advantages, limitations and applications of plasma arc machining. [7]
- 8 a) Explain the working principle of shaped tube electrolytic machining with neat sketch. [8]
b) Distinguish between electro stream drilling and electro chemical drilling. [7]