Code No: **R41034** **R10** **Set No. 1**

**IV B.Tech I Semester Supplementary Examinations, Oct/Nov - 2018**

# UN CONVENTIONAL MACHINING PROCESSES

**(Mechanical Engineering)**

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

**Answer any FIVE Questions**
**All Questions carry equal marks**
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| 1 | a) | Explain the limitations of conventional machining process and explain the need for Unconventional machining process. | [8] |
| | b) | What are the various considerations in process selection and its applications in unconventional machining process? | [7] |
| 2 | a) | Give in detail about economic considerations, applications and limitations of ultrasonic machining. | [8] |
| | b) | Discuss in detail the principle and process parameters of Ultrasonic machining. | [7] |
| 3 | a) | Explain the basic principles, equipment's, process variables, mechanics of material removal of water jet machining. | [8] |
| | b) | Explain the basic principles, equipment's, process variables, mechanics of material removal of abrasive water jet machining. | [7] |
| 4 | a) | Explain the fundamentals of electro chemical machining. | [8] |
| | b) | Discuss in brief about metal removal rate in ECM. | [7] |
| 5 | a) | Discuss in detail about Mechanics of metal removal in EDM. | [8] |
| | b) | Explain about the characteristics of spark eroded surface. | [7] |
| 6 | a) | Why EBM is carried out in vacuum? Explain the working principle of EBM with neat sketch. | [8] |
| | b) | Explain the basic principle and theory of LBM. | [7] |
| 7 | a) | Differentiate between transferred mode PAM and non transferred mode PAM. | [8] |
| | b) | Explain the applications of plasma for metal removal mechanism. | [7] |
| 8 | a) | Describe about Shaped tube electrolytic machining. | [8] |
| | b) | Explain in detail about the Abrasive flow finishing. | [7] |