



Reg. No. :

Name :

**Seventh Semester B.Tech. Degree Examination, June 2018
(2008 Scheme)**

08.706.12 : NON CONVENTIONAL MACHINING TECHNIQUES (MPU)

Time : 3 Hours

Max. Marks : 100

- Instructions :** 1) *Part A* – Answer **all** questions.
2) *Part B* – Answer **any one full** question from **each** Module.

PART – A

1. List the unconventional machining processes, which use Mechanical Energy.
2. Enumerate the unique benefits offered by AWJM.
3. What are the types of work materials for USM ?
4. What are the desirable properties of carrier gas in AJM ?
5. What are the limitations of EBM ?
6. Indicate the range of pulse duration and current in EDM.
7. What is the acronym for LASER ? List out the characteristics of LASER.
8. Why is the deflection coil provided for EBM ?
9. What is MRR ? Indicate typical range of MRR for CHM.
10. Name any two electrolytes used in ECM. Also enumerate their specific characteristics. **(10×4=40 Marks)**

PART – B

Module – I

11. i) With the aid of neat schematic, explain the operation of Water jet machining process. **15**
ii) Explain the process parameters that affect the performance of Water jet machining process. **5**
- OR**
12. i) Mention the advantages and disadvantages of AJM process. **5**
ii) Explain the principle and operation of AJM with a neat diagram. **15**

P.T.O.

**Module – II**

13. i) Describe the constructional details of Electron Beam Machining equipment. **15**
- ii) Enumerate the advantages, disadvantages and applications of EBM process. **5**

OR

14. i) Explain the ECM process. Explain how a replica of the tool is obtained ? **15**
- ii) Discuss about the process capabilities of ECM process. **5**

Module – III

15. i) Explain the principle of working of the AJM process with a neat schematic. **15**
- ii) Enumerate the advantages, disadvantages and applications of AJM process. **5**

OR

16. i) Explain about the effect of operating parameters on MRR of USM process. **10**
- ii) Explain the function of transducers and horns used in USM. **10**
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