

FACULTY OF ENGINEERING

B.E. 4/4 (M/P) II-Semester (Main) Examination, April / May 2013

**Subject : Modern Machining and Forming Methods
(Elective-III)**

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

1. What do you understand by non-conventional machining methods.
2. What are the types of abrasive materials and give their characteristics?
3. Define MRR. What are the variables affecting MRR?
4. Sketch schematic diagram of WJM.
5. Define over cut and side taper in EDM.
6. What are the functions and characteristics of electrolyte in ECM?
7. What are the advantages of hot machining?
8. What are the types of materials used for LBM production?
9. Differentiate between spinning and flow forming.
10. What is the effect of stand off distance in explosive forming?

PART – B (5x10=50 Marks)

- 11.(a) Explain the effect of process parameters on MRR and surface finish the USM.
(b) Discuss the advantages, limitations and application of water jet machining.
- 12.(a) Explain the principle and working of EDM with a neat sketch.
(b) Discuss the limitations and characteristics of ECM.
- 13.(a) What do you understand by the term LASER? How is a laser beam produced?
(b) Explain and give applications of ION etching process.
- 14.(a) Differentiate between Rubber pad forming and hydro forming.
(b) Explain the principle and limitations of contact type of explosive forming process.
- 15.(a) Differentiate between stretch draw forming and rotary stretch forming.
(b) Explain the working principle, process variables and applications of WHF.
- 16.(a) Explain the principle of hydrostatic forming process with help of a neat sketch.
(b) Explain the principle and application of AJM.
17. Write short notes on the following:
 - (a) Plasma Arc Machining (PAM)
 - (b) Tube spinning
 - (c) Electron Beam Machining (EBM)