Code No. 3226

FACULTY OF ENGINEERING

B.E. 4 / 4 (Mech. / Prod.) II – Semester (Main) Examination, May / June 2011

Subject: Modern Machining & Forming Methods (Elective – III)

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

Note: Answer all questions from Part A. Answer any Five questions from Part B.

PART – A (25 Marks)

1. What are the functions of liquid medium in slurry used in USM?
2. What are the advantages and disadvantages of water jet machining?
3. Why chemical machining process is known as selective material removal process?
4. What are the functions of dielectric medium in EDM?
5. State the equations for power density and machining rate in LBM.
6. How electron beam is produced?
7. Why gas bubbles are formed in explosive forming process?
8. Sketch a schematic of tube bulging with rubber pads.
9. How metal properties effect the tube spinning?
10. Differentiate between compression and radial draw forming.

PART – B (50 Marks)

11.(a) Explain the role of transducers in USM? 5

(b) Explain the principle of ATM operation and process details. 5

12.(a) Discuss the over cut and side taper in EDM. 5

(b) Differentiate between Rotary maching and Hot maching. 5

13.(a) Explain the laser beam machining. Give limitations and applications. 5

(b) Explain transferred and non-transferred acer in plasma are machining. 5

14.(a) Explain the hydro-forming process with a neat sketch. 5

(b) Explain the explosive forming process and give its limitations and applications. 5

15.(a) Differentiate between backward flow and forward flow spinning. 5

(b) What are the advantages and limitations of water hammer forming? 5

16. Give details of rubber pad forming explaining the various processes involved in it and applications. 10

17. Write short notes on any TWO of the following: 10
    a) Electron Beam Machining
    b) High Speed maching
    c) Ion etching

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