

Roll No.

									✓
--	--	--	--	--	--	--	--	--	---

B.E. (Full Time) End Semester DEGREE EXAMINATION, APRIL / MAY 2011

Fifth Semester

Mechanical Engineering

ME 9304 – MODERN MACHINING PROCESSES.

(Regulation 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. List the modern manufacturing process, which uses electro chemical energy.
2. Which modern machining process, produces high surface finish? Why?
3. Which material used for a nozzle in AJM process? Why ?
4. List the practical applications of WJM process.
5. Name the common di-electric fluids used in EDM process.
6. What are the advantages of rotary pluse generator circuit in EDM process?
7. State the function of electrolyte in ECM process.
8. What is the basic principle of ECM process?
9. Why deflection coil is used in EBM process?
10. What materials can be machined by using LBM?

Part – B (5 x 16 = 80 marks)

11. a) i) With the help of a simple sketch, explain the mechanism of material removal in EDM process. (8)
ii) How the following process parameters affect the MRR on EDM process. (8)
i) Resistance ii) Pulse energy iii) current density
12. a) i) What are the characteristics of modern machining process? (8)
ii) State the needs of modern machining process. (8)

OR

- b) Classify the modern machining process based on (16)
i) Physical parameters ii) shapes to be machined iii) Materials.
13. a) What are the basic requirements of feed mechanism in USM process? With the aid of simple sketches, explain any two feed mechanism in USM process. (16)

OR

- b) Discuss the effect of following process parameters on MRR in AJM process. (16)
i) Abrasive flow rate ii) Gas pressure iii) Abrasive grain size
iv) Mixing ratio.

14. a) Write a short notes on (16)
- i) Electro – Chemical Deburring
 - ii) Electro-Chemical honing.

OR

- b) How the tools are designed for easy flow Electrolyte in ECM process? (16)
Discuss any two methods in detail.
15. a) Distinguish between Direct arc and indirect arc pam process based on construction, working principle, advantages, limitations and applications. (16)

OR

- b) i) Explain effect of “over and under focusing” on performance of LBM. (12)
- ii) List the practical applications of LBM process. (4)