Roll No. ..... Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ME) (Sem.–7th & 8th)

NON-TRADITIONAL MACHINING

Subject Code : DE/PE-2.0

Paper ID : [A0875]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

(a) Enumerate the non-traditional manufacturing processes utilizing Electrical energy for machining purposes.

(b) Give the applications of non-conventional manufacturing processes.

(c) What are the main functions of electrolytes in the ECM?

(d) What are the characteristics of a good ECM tool?

(e) What is ultrasonic machining?

(f) Name some of the tool materials used in EDM.

(g) Define the term 'etch factor' used in chemical machining.

(h) How electrochemical grinding process differs from conventional grinding process?

i) Why vacuum is needed in EBM?

j) What are the gases commonly used in LASER?

SECTION-B

2. Distinguish between traditional and non-traditi giving appropriate examples.

3. What is the principle of chemical machining? Bri and etchants used in chemical machining.

4. Explain the working of electron beam machining beam gun.

5. Describe the principle of Plasma arc Machining generated? Also describe the circuitry details in

6. Explain hot machining process giving various app

SECTION-C

7. Explain the working principle of Ultrasonic Machini used in USM metal removal giving a neat ske variables that control the metal removal rate in U

8. What are various gas lasers used in industry fo Explain the working of a gas laser with the help

9. With the neat sketches discuss the working prin of an Electric Discharge Machining process and disadvantages of EDM.