PVP 14

Code: ME7T5B

IV B.Tech - I Semester – Regular/Supplementary Examinations
October - 2019

ADVANCED MACHINING PROCESSES
(MECHANICAL ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11 x 2 = 22 M

1. a) What are the characteristics of non-traditional machining methods?
   b) How non – traditional machining processes are classified?
   c) Write the applications and limitations of ultrasonic machining.
   d) State the applications of AJM process.
   e) What is abrasive water jet machining process?
   f) What is the difference between electrochemical and chemical machining processes?
   g) What is electro chemical deburring process?
   h) Write the functions and essential characteristics of dielectric fluids in EDM.
   i) Name the dielectric fluids commonly used in EDM.
   j) State the principle of LBM process.
   k) What do you understand by fourth state of matter?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain the importance of non-traditional Machining methods. 8 M

b) Explain how material is removed in ultrasonic machining. 8 M

3. a) List and explain the variables used in AJM. 8 M

b) Explain how material is removed in AWJM. 8 M

4. a) Explain the electrochemical deburring and honing processes in detail. 8 M

b) In chemical machining, what are the factors by which the selection of etchants is governed? 8 M

5. a) Explain the operating principle of circuits in Electric Discharge Machining. 8 M

b) Sketch and explain the generation and control of electron beam in EBM process. 8 M

6. a) Explain the production of Laser beam. 8 M

b) Explain the types of plasma arc torches used in Plasma Arc Machining. 8 M