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Total number of printed pages – 2

B. Tech
PEME 5306

Sixth Semester Back Examination – 2015
MODERN MANUFACTURING PROCESSES

BRANCH : MECH

QUESTION CODE : M 302

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any five from the rest.
The figures in the right-hand margin indicate marks.*



1. Answer the following questions : 2×10
- What are the characteristics and function of dielectric fluid used in EDM ?
 - List the advantages of Non Traditional Machining processes.
 - What do you mean by Rapid prototyping ?
 - State the characteristics and function of dielectric fluid used in EDM.
 - What do you mean by surface Engineering ?
 - Write the application of different types of abrasives used in AJM.
 - Distinguish between EDM and LBM on the basis of principle of working.
 - Describe Electron Beam Machining process.
 - Explain Plasma Arc Machining.
 - What do you mean nano machining ?
2. Describe the USM process with neat sketches. Give various advantages, disadvantages and applications. 10

P.T.O.

3. What are the different equipments available in ECM ? Explain briefly with neat sketches. 10
4. (a) Explain and draw a schematic diagram of AJM process and label it. 5
(b) Describe the working principles of EDM. Explain briefly with neat sketches. 5
5. (a) Write five important variables of AJM process. Draw a sketch showing the effect of one of these variables on MRR. 5
(b) What are the equipments required for EBM machine ? Explain briefly with neat sketches. 5
6. (a) What are the parameters that affect the MRR in USM ? Explain briefly. 5
(b) What is the mechanism of metal removal in electrochemical machining ? What are the functions of electrolyte in ECM ? 5
7. (a) How the Mechanism of metal removal occurs in LBM ? Explain the Applications, Advantages and limitations. 5
(b) Describe chemical machining. Explain briefly. 5
8. Write short notes any **two** of the following : 5x2
- (a) Concurrent Engineering
 - (b) PVD and CVD
 - (c) Coating and Electroless forming
 - (d) stand off distance (SOD).

