Exam.Code:0942 Sub. Code: 33877

## 2015

## B.E. (Mechanical Engineering) Sixth Semester

## **MEC-606: Advanced Manufacturing Techniques**

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt <u>five</u> questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

(d)       What is standoff distance in AJM?       1         (e)       Write the Faraday's first law of electrolysis for ECM process?       1         (f)       What are Horn and transducers used in USM process?       1         (g)       Write the applications of EDG process?       1         (h)       What are the applications of EDM?       1         (i)       Write the applications of Chemical Machining process?       1         (j)       Describe the Ion Beam Machining principle?       1         SECTION-A         2(a)       What is the rationale behind in the development of Advanced Manufacturing Techniques? Justify your answer with examples.       5         (b)       Describe the machining principle of AJM?       5	1 (a)	What are Advanced Manufacturing Techniques? What are the various types of	1	
and surface integrity.  (c) List the process parameters of LBM?  (d) What is standoff distance in AJM?  (e) Write the Faraday's first law of electrolysis for ECM process?  (f) What are Horn and transducers used in USM process?  (g) Write the applications of EDG process?  (h) What are the applications of EDM?  (i) Write the applications of Chemical Machining process?  (j) Describe the Ion Beam Machining principle?  (ii) Write the applications of Chemical Machining process?  (j) Describe the Ion Beam Machining principle?  (b) Describe the Ion Beam Machining principle?  (b) Describe the machining principle of AJM?  (g) With the help of a neat sketch explain the working principle and mechanism of Ultrasonic machining process?  (b) Explain the principle of Chemical machining and list its product applications.  (c) Explain the principle of Chemical machining and list its product applications.  (d) What are the desirable properties of abrasives used in AWJM?  (d) What are the various process parameters that affect the MRR and surface finish in Electronal Chemical Machining?  (e) Explain the principle and mechanism of material removal in Electronal distribution of EDGM).  (b) Explain the principle and mechanism of material removal in Electronal distribution of EDGM).  (c) Differentiate between IBM and LBM with respect to principle, MRR, and suitability of machining (At least two point each).  (d) Describe in detail the working, process parameters, equipment and mechanism of material removal of Electron Beam Machining.		energy sources used in Advanced Manufacturing Techniques?		
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