

**BACHELOR OF TECHNOLOGY IN
MECHANICAL ENGINEERING
(COMPUTER INTEGRATED
MANUFACTURING)**

Term-End Examination

June, 2012

**BME-023 : ADVANCED MANUFACTURING
TECHNOLOGY**

Time : 3 Hours

Maximum Marks : 70

Note : Answer any seven questions.

1. What are the objectives of Concurrent Engineering? Also explain in detail the guidelines for implementation of concurrent engineering projects. 10

2. (a) What are the challenges seen in near net shape machining process? Explain. 5
(b) What are the different approaches available for Design for Assembly? 5

3. With a neat sketch give an overview of various components of HOQ (House of Quality). 10

4. (a) Explain the major road blocks seen by companies during the implementation of DFMA process. 5
(b) Explain the importance of Design for Environment in industrial environment. 5

5. Describe the hybrid manufacturing system giving suitable examples. Also sketch the flow chart of a hybrid process. 10
6. Explain the different contact techniques and non-contact techniques for data capture. 10
7. (a) Sketch the working of SLS with a neat diagram. 5
(b) Describe the investment casting process and its applications. 5
8. (a) What are the different challenges seen in e-manufacturing ? Explain with suitable examples. 5
(b) What are the two types of singularities seen in PKM ? Explain. 5
9. Write short notes on *any two* of the following :
(a) Machine control station 5
(b) Limitations of rapid prototyping 5
(c) Micro-milling and micro-drilling 5
-