

**B.Tech. MECHANICAL ENGINEERING
(COMPUTER INTEGRATED
MANUFACTURING)**

01198

Term-End Examination

June, 2014

**BME-023 : ADVANCED MANUFACTURING
TECHNOLOGY**

Time : 3 hours

Maximum Marks : 70

Note : Answer any *seven* questions.

1. (a) Explain various phases of QFD process. 5
(b) Discuss the advantages and disadvantages of Prototyping. 5
2. (a) Briefly explain the concept of "Design for X" (DfX). 5
(b) Explain the steps in DFMA process. 5
3. (a) Discuss the methods of "Near Net Shape" manufacturing. 5
(b) Write about Nano-Technology with its applications. 5
4. Explain about "Laminated Object Manufacturing" with neat diagram. 10

5. Briefly explain the following : 5+5
- (a) Concept Modelling
 - (b) Functional Testing
6. (a) Write about “Investment Casting”. 5
- (b) Explain 3D KELTOOL process. 5
7. Explain about “E-manufacturing Architecture” with suitable diagram. 10
8. (a) What is Hybrid manufacturing ? Explain manufacturing of “Optical Fibre” using Hybrid manufacturing. 5
- (b) What are the different techniques for implementing concurrent engineering ? Explain one of them briefly. 5
9. Write short notes on any *two* of the following : 5+5
- (a) E-manufacturing strategy
 - (b) Rapid Tooling
 - (c) Stereolithography
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