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BME-023

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

01112

Term-End Examination

December, 2011

BME-023 : ADVANCED MANUFACTURING TECHNOLOGY

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any seven** questions.*

1. (a) Describe the near netshape manufacturing and its applications. Also describe the methods of near netshape manufacturing. 5 5

   (b) Describe the LIGA micro-fabrication process with a neat sketch.

2. With the help of a neat diagram describe the foundation model of concurrent engineering. Also explain the guidelines for implementation of concurrent engineering projects. 10

3. (a) What are the building blocks of QFD ? Explain. 5

   (b) Explain the principles of design for production. How is design for manufacture and design for Assembly different from design for production engineering ? 5

4. (a) Explain ACES Injection Molding process and its advantages and disadvantages. 5

(b) Describe some of the benefits of using reverse engineering. 5

5. Explain the working of solid Ground Curing technique with a neat sketch. 10

6. Discuss the various indirect methods for rapid tool production. 10

7. (a) Compare the information flow in a conventional and e-manufacturing setup. 5

(b) Describe important web portals that can be used for e-manufacturing environment. 5

8. Describe the e-manufacturing architecture with the help of a neat sketch. 10

9. Write short notes on ***any two*** of the following :

(a) Kano's model 5

(b) Software rapid prototype 5

(c) Condition index mapping 5