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BME-023

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

Term-End Examination

December, 2013

BME-023 : ADVANCED MANUFACTURING TECHNOLOGY

Time : 3 Hours *Maximum Marks : 70*

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

1. (a) Explain the "LIGA Micro-fabrication Process". 5
   (b) Discuss in brief about Micro milling and Micro - drilling with suitable examples. 5

2. (a) What is "Hybrid control" ? Why it is required in manufacturing environment ? 5
   (b) What are the different methods of Nano-Tube manufacturing ? Explain any one of them briefly. 5

3. (a) What is "Sequential Engineering Approach" ? Discuss its weaknesses. 5
   (b) Explain briefly about the "Principles of Concurrent Engineering". 5

4. (a) Explain the principles of "Design for - production ". 5

(b) What do you understand by "Kano's model" ? Explain briefly. 5

5. (a) Briefly explain 3.D Printing ? 5

(b) Write about stair stepping 5

6. What are the different prototyping techniques ? Explain about "Laser-Engineered Net Shaping (LENS) ? 10

7. (a) Write about "Topographic Shape Formation (TSF) with its advantages and disadvantages. 5

(b) Explain the classification of Rapid Tooling processes. 5

8. (a) What is the need of Reverse Engineering ? 5

(b) Explain any one method of "Non-contact Technique for Data capture" ? 5

9. Write short notes on **Any Two** of the following : 5+5

(a) LAN v/s WAN

(b) Benefits of CNC Internetworking

(c) Applications of Nano-materials