| **BME-023**

B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

Term-End Examination

December, 2018

00693

BME-023 : ADVANCED MANUFACTURING TECHNOLOGY

Time : 3 hours   *Maximum Marks : 70*

Note : *Answer any* ***seven*** *questions. All questions carry equal marks.*

1. (a) What is near net shape manufacturing ? Describe some reported works of near net shape manufacturing.   5

   (b) Enumerate the projected growth of ceramic near net shape manufacturing.   5

2. (a) What is meant by the term 'Rapid Tooling' ? Briefly describe the steps involved in the rapid steel 1·0 process.   5

   (b) Explain the direct and indirect rapid tooling processes.   5

3. (a) Describe the concept and importance of design for X during new product development phases. 5

   (b) What are the various DFM implementation guidelines ? Explain any three. 5

4. What is hybrid manufacturing system ? Explain the hybrid process of Hybrid Plasma Deposition and Milling (HPDM). 10

5. What is Voice of Customer ? Explain the various methods of gathering the voice of customer. 10

6. (a) Briefly describe the three types of LAN topologies. 5

   (b) Explain the mechanism of WAN type of network data transmission. 5

7. Describe 3-D Keltool process. Discuss the advantage, disadvantages and applications of 3-D Keltool process. 10

8. (a) What is reverse engineering ? Discuss the various applications of reverse engineering. 5

   (b) Briefly explain the data acquisition techniques. 5

9. Write short notes on any *two* of the following : *5+5=10*

   (a) Role of Nano-technology in Manufacturing

   (b) Prototyping Technologies

   (c) Applications of Micro-fabrication
        Technologies

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