|BME-023|

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

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## Term-End Examination

## June, 2019

## BME-023 : ADVANCED MANUFACTURING TECHNOLOGY

*Time : 3 hours*                      *Maximum Marks : 70*

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

1.  (a) Differentiate between micro-milling and micro-drilling processes.                    5

    (b) Describe the crucial issues in web-based manufacturing.                               5

2.  a) Explain the salient features of Kano's model.                                          5

    (b) Describe how 'voice of customer' is used in designing a new product. Discuss the limitations of 'voice of customer'.          5

3.  (a)  Explain the steps involved in Design for Manufacturing and Assembly (DFMA) process.    5

    (b)  Discuss the various strategies involved in e-Manufacturing.    5

4.  (a)  Explain the working mechanism of WAN type of network data transmission.    5

    (b)  Describe, with the help of neat sketch, the features of stereolithography method.    5

5.  (a)  Explain sequential engineering approach of product development. What are the limitations of this approach ?    5

    (b)  Being the business manager of a company, discuss the guidelines for managing concurrent engineering projects.    5

6.  With the help of a neat diagram, explain the various matrices in House of Quality (HOQ).    10

7.  With the help of neat diagram, describe 'Laminated Object Manufacturing'.    10

8.  Briefly explain the following :    5+5=10

    (a)  Investment Casting

    (b)  3D Keltool Process

**9.** (a) Discuss the role of Nano-technology in manufacturing. *5*

(b) Describe the importance of logistics and supply chain management in e-Manufacturing. *5*

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