

28/05/2019

Roll No.

Total Pages : 03

BT-6/M-19

36129

COMPUTER AIDED DESIGN &
MANUFACTURING

ME-308-N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. (a) Briefly describe the history of CAD/CAM development. 7
- (b) Explain the product life cycle in conventional and computer-aided manufacturing environments. 8
2. (a) What is computer integrated manufacturing (CIM)? Explain the different elements of CIM. 8
- (b) What is computer aided quality control? What are its advantages? 7

Unit II

3. (a) What is parametric form of an equation and why is it required? 5

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P.T.O.

- (b) Find the coordinates of the Hermite cubic curve at $u = 0.25$, when curve starts from (0, 3) and ends up (4, 2) with tangent at the start is defined by angle 45° and 90° . **10**
4. (a) Differentiate between a plane, ruled and tabulated surface. **7**
- (b) Explain the boundary representation method of solid modelling with an example. **8**

Unit III

5. (a) What are basic transformations ? Explain them. **8**
- (b) The homogeneous coordinate system is the most preferred way to be used in geometric modelling why ? **7**
6. (a) What is group technology (GT) ? Why is GT more important in present manufacturing scenario ? **5**
- (b) What is the basis for forming part families in GT ? **5**
- (c) Explain the Optiz Coding System with an example. **5**

Unit IV

7. (a) Explain the importance of machine control unit in NC. **5**

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- (b) What are various methods of interpolation in part programming ? Explain in detail. 10
8. (a) Explain the principal components of flexible manufacturing system. 8
- (b) Explain in detail methodology followed for developing a generative type of computer aid process planning system. 7

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