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.
 - (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?

Unit II

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

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- 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° .
- 4. (a) Differentiate between a plane, ruled and tabulated surface.
 - (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?
- 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?

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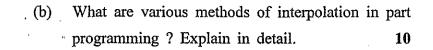
(c) Explain the Optiz Coding System with an example.

Unit IV

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

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- 8. (a) Explain the principal components of flexible manufacturing system.
 - (b) Explain in detail methodology followed for developing a generative type of computer aid process planning system.

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