

Roll No

ME-804

B.E. VIII Semester

Examination, December 2016

CAD / CAM / CIM

Time : Three Hours

Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is Production Activity Control?
b) What is CIM?
c) Explain the concept of design for manufacturing.
d) Discuss the CIM wheel with neat sketch. Briefly discuss various elements of CIM?

OR

What is Generative CAPP? State benefits of CAPP.

Unit - II

2. a) What is IGES?
b) What is PDM?
c) Show that translation is commutative.
d) Describe some important features of an EDM (Engineering Data Management) system.

OR

At point P lies originally at the position $(\sqrt{2}, 0)$. Find its co-ordinates if it is rotated 45° clockwise about the origin. If it is given a subsequent rotation of 45° , what will its co-ordinate be?

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PTO

Unit - III

3. a) What is Wire Frame modeling?
b) What do you understand by geometric entities in relation to CAD?
c) What are the limitations in utilizing the sweep method for geometric construction?
d) Explain any one of the curve-fitting techniques that is relevant in CAD applications.

OR

A Cubic Bezier curve is defined by the control points as (20, 20), (40, 60), (80, 80) and (120, 30). Find the equation of the curve and its mid point.

Unit - IV

4. a) What do you understand by the term numerical control?
b) What is the difference between NC and CNC?
c) What do you understand by the term 'Canned cycle' in manual part programming?
d) How do you set the tool offsets in case of turning centres? Explain with an example.

OR

What is Dwell? Explain its function and how it is specified in a part program.

Unit - V

5. a) What is Production Flow Analysis?
b) What are Transfer Lines?
c) State benefits of cellular manufacturing.
d) What is Group Technology? Explain part classification and write various coding system.

OR

Describe the principle of flexible manufacturing systems. Why is a flexible manufacturing system capable of producing a wide range of lot sizes.

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