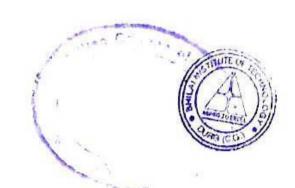
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## 337713 (37)

BE (7th Semester)

Examination, April-May, 2013

**Branch: Mechanical, Mechatronics** 

# COMPUTER AIDED DESIGN & MANUFACTURING

Time Allowed : Three Hours

Maximum Marks: 80

Minimum Pass Marks: 28

Note: Part (a) of each question is compulsory. Solve

any two parts from (b), (c) and (d) in each

question.

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#### UNIT - I

Q. 1. (a) Write the name of 2 CAD and 2 CAM

software.

2

(b) Briefly explain the computerised product

cycle in the manufacturing environment. 7

(c) Briefly explain the requirements for a graphic

database.

7

(d) What do you understand by concurrent

engineering? How it is better than sequential

engineering?

1

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#### UNIT - II

Q. 2. (a) Define Geometric Modeling.

(b) What is the best kind of a modeling

system? Explain with suitable sketches. 7

(c) What do you mean by Rapid Prototyping?

Give the detail of any one rapid-prototyping

process you are familiar with.

7

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Give a classification of the different surfaces

that can be used in geometric modelling

applications?

7

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(4)

#### UNIT - III

(a) Define Numerical Control.

7

7

(b) What are the requirements of feedback

7 devices in CNC machine tools?

(c) What is adaptive control optimisation? How

it is used in CNC machine?

(d) What are the basic assumptions made while

programming in APT language?

#### **UNIT-IV**

(a) Define computer integrated manufacturing. 2

(b) Explain the types of coding system possible 7

for group technology.

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(5)

(c) What is computer aided process planning and hence explain varient and generative approach to CAPP.

(d) What are the major element of Flexible

Manufacturing System (FMS). 7

#### UNIT - V

Q. 5. (a) Define finite element method.

(b) Explain functions served by preprocessor and post processor in FEM.

(c) What are various types of analysis in finite element methods? Explain.

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(d) Write short notes on :

7

(i) Discretization

(ii) Stiffness matrix

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