[Oct.-17]

[EURME-702A]  
B.Tech. Degree Examination  
Mechanical Engineering  
VII SEMESTER  
CAD/CAM  
(Effective from the admitted batch 2012–13 onwards)

Time: 3 Hours Max.Marks: 60

Instructions: Each Unit carries 12 marks.  
Answer all units choosing one question from each unit.  
All parts of the unit must be answered in one place only.  
Figures in the right hand margin indicate marks allotted.

UNIT-I

1. a) What are the reasons for implementing a computer aided design system?  
   b) With the help of a block diagram, explain the computer aided design process  

   OR

2. a) Discuss the various input devices used in CAD system  
   b) With the help of a neat sketch, explain the produce cycle with the implementation of CAD

UNIT-II

3. a) Explain the concept of wire frame modeling with a neat diagram  
   b) Briefly explain the concept of non parametric representation of curves with neat sketch

   OR

4. a) What are the types of geometric modeling explain any one with neat figure  
   b) Why parametric representation of curves is encouraging in CAD modeling?
UNIT-III

5. a) What is the role of primitives and Boolean operations in constructive solid geometry? Explain with suitable examples 8
   b) Discuss about sweep representation with an example 4

OR

6. a) Discuss about surface modeling technique 6
   b) Distinguish between wire frame and solid modeling 6

UNIT-IV

7. a) Explain the methods of manual part programming in detail 6
   b) State and describe the basic components of NC system 6

OR

8. a) A turning operation is to be performed on an NC lathe. Cutting speed=2.5 m/sec, feed=0.2 mm/rev, and depth=4.0 mm. Work piece diameter=100 mm and its length=400 mn. Determine (i) the rotational speed of the workbar, (ii) the feed rate (iii) the metal removal rate, and (iv) the time to travel from one end of the part to the other 6
   b) Explain the various types of robot controllers 6

UNIT-V

9. a) Explain the procedure of production flow analysis (PFA) 6
   b) Explain the basic structure of the opitz system of parts classification and coding 6

OR

10. a) Distinguish retrieval and generative type of CAPP 6
    b) Explain the various types of FMS system 6

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