ANNA UNIVERSITY OF TECHNOLOGY, COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : NOV / DEC2011

REGULATIONS : 2008

FIFTH SEMESTER - MECHANICAL ENGINEERING

080120024 - COMPUTER AIDED MANUFACTURING

Time : 3 Hours **Max.Marks : 100**

PART - A

(10 x 2 = 20 MARKS)

ANSWER ALL QUESTIONS

1. State Group technology.
2. Define Direct Numerical Control.
3. List out the functions of CNC control in Machine Tools.
4. Mention any four CAD/CAM software packages commonly used.
5. Differentiate spindle drives and feed drives.
6. Define Automatic Tool changers.
7. Give the tooling for CNC machines.
8. What is a Canned cycles.
9. Differentiate variant approach and generative approach.
10. Write a note on Tolerance Modeling.

PART - B

(5 x 16 = 80 MARKS)

ANSWER ALL QUESTIONS

11 a) Explain the current trends in Manufacturing engineering towards the application of Rapid prototyping.

(OR)

b) Describe the total approach to product development plotting product life cycle curve.

12 a) Block out the classification of CNC systems indicating its constructional features.

(OR)

b) Distinguish between Open loop and Closed loop CNC system and write a note on its Hardware features.

13 a) Explain the Design considerations of CNC machines for machining accuracy.

(OR)

b) Narrate the work holding devices and tool holding devices with neat sketch.

14. a) Write a Part program for step turning operation on lathe specifying its codes clearly.

(OR)

b) Explain various machining operations from 3D models and write a note on APT language.

15. a) Block out the architecture of Database Systems indicating the advantages of database and relational database. 6+6

b) Explain the emerging challenges in CAD/CAM with its role in the process planning integration tracing out product modeling.

*******THE END*******