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Question Paper Code : 31039

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Fifth Semester

Mechanical Engineering

080120024 — COMPUTER AIDED MANUFACTURING

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write a note on Group Technology.
2. Mention any two benefits of Rapid prototyping.
3. Differentiate CNC and DNC (any two points).
4. What is meant by open loop CNC systems?
5. Write any two factors to be considered in the design of CNC machines.
6. Write briefly on tooling for CNC machines.
7. What is meant by canned cycles?
8. How 3D models will be useful for machining?
9. Write about the role of process planning in CAD/CAM integration.
10. Mention any two emerging challenges in CAD/CAM.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Mention about the current trends in Manufacturing Engineering. (8)
(ii) Write short notes on Design for Manufacturing and Assembly. (8)
- Or
- (b) (i) Write about concurrent engineering. (8)
(ii) Write about the CAD/CAM software packages known to you. (8)

12. (a) (i) What are the functions of CNC control in Machine Tools? (8)
(ii) How do you classify CNG systems? (8)

Or

- (b) (i) Write about CNC controllers. (8)
(ii) Write short notes on Hardware features of CNC Machines. (8)
13. (a) (i) Write about Slide ways in CNC Machines. (8)
(ii) Write short notes on Spindle drives and feed drives in CNC Machines. (8)

Or

- (b) Write short notes on .
(i) Automatic tool changers
(ii) Feedback devices. (16)
14. (a) (i) Write about numerical control codes used in part programming. (8)
(ii) Write the method of manual part programming for a point to point application with an example. (8)

Or

- (b) (i) Explain about Computer Assisted Part Programming. (8)
(ii) Write the various types of statements used in APT language. (8)
15. (a) (i) Write about the variant approach to Computer Aided Process Planning. (8)
(ii) List the benefits of Computer Aided Process Planning. (8)

Or

- (b) (i) Write about the architecture of Database Management Systems. (8)
(ii) What are the advantages of database? (8)