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Question Paper Code : 13050

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2012.

Fifth Semester

Mechanical Engineering

080120024 — COMPUTER AIDED MANUFACTURING

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Define group technology.

2. List *any two* CAD and CAM packages.

3. Differentiate open-loop and closed-loop control.

4. Differentiate CNC and DNC.

5. Sketch *any two* slide way profiles.

6. What is meant by a machining center?

7. What is meant by canned cycle?

8. Write the default mode for a geometric statement in APT language.

9. List the *two types* of CAPP.

10. List any two advantages of relational database.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write a note on the current trends in manufacturing. (8)

(ii) Briefly outline the features of rapid prototyping. (8)

Or

(b) Write a critical note on design for manufacturing and assembly. (16)

12. (a) With a suitable sketch wherever necessary, explain the classifications of CNC machines. (16)

Or

(b) (i) With a suitable sketch, explain the working of an interpolator. (8)

(ii) Write a note on DNC system. (8)

13. (a) (i) With a neat sketch, explain the construction and working of ball screws. (8)

(ii) Briefly outline the need and types of feedback device. (8)

Or

(b) (i) Write a note on the design considerations of slideways. (8)

(ii) Write a note on automatic tool changers. (8)

14. (a) With a suitable application example of your choice, explain the various types of manual part programming methods. (16)

Or

(b) (i) Write a note on the numerical control codes and standards. (8)

(ii) Briefly explain the advantages of computer assisted part programming. (8)

15. (a) (i) With a suitable flow chart, explain the variant type CAPP. (8)

(ii) Briefly explain tolerance modelling. (8)

Or

(b) Write a critical note on the development of database. (16)
