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**Question Paper Code : 71085**

M.E. DEGREE EXAMINATION, JUNE/JULY 2013.

CAD/CAM

CC 9222/CC 922/UED 9173/10222 CD 202 — INTEGRATED MANUFACTURING SYSTEMS

(Common to M.E. Computer Aided Design, M.E. Engineering Design and M.E. Product Design and Development)

(Regulation 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the objectives of a manufacturing system.

2. What is meant by multi-station cell?

3. Define part family.

4. List any two major benefits of group technology.

5. What is the need for factory data collection?

6. Name any two important advantages of barcode.

7. What is the function of direct digital control?

8. List any two advantages of non-contact inspection method.

9. List the components of flexible manufacturing system.

10. Name the steps involved in Rapid prototyping processes.

PART B — (5 × 16 = 80 marks)

11. (a) Write a critical note on the characteristic features of Type-I, Type-II and Type-III manufacturing systems. (16)

Or

(b) (i) Write a note on identifying business opportunities. (8)

(ii) Compare single station manned cell and single station automated cell. (8)

12. (a) Write a critical note on parts classification and coding system. (16)

Or

(b) Write a critical note on the two types of Computer Aided Process Planning. Compare their features and list their merits and limitations. (16)

13. (a) (i) Briefly explain computer aided production planning and control. (8)

(ii) Explain shop floor control. (8)

Or

(b) Write a critical note on the types of automated identification systems used on a shop floor. (16)

14. (a) (i) Explain the types of production monitoring systems. (8)

(ii) Explain computer aided testing. (8)

Or

(b) With suitable sketch, describe any two types of non-contact inspection methods. List their respective merits and limitations. (16)

15. (a) (i) Explain DNC systems. (8)

(ii) Write a note on head changing FMS. (8)

Or

(b) (i) Write a note on computer control in integrated manufacturing systems. (8)

(ii) With a neat sketch, explain stereolithography. (8)

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