Register Number ……

M.E. DEGREE EXAMINATIONS: JANUARY 2011

First Semester

CAD/CAM

CCM501: Computer Integrated Manufacturing Systems

Time: Three Hours **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. What is meant by production capacity?
2. What is meant by product variety? How to differentiate the product variety as 'hard' and 'soft'?
3. What are the benefits of group technology?
4. What are the basic information presented in a route sheet?
5. What are the principle components of automatic data capture?
6. What is the difference between carrying cost and stock-out cost in inventory control system?
7. What is meant by flexible inspection system?
8. What are the advantages of non contact inspection over contact inspection method?
9. List any four material handling storage systems.
10. List the various components of manufacturing system.

PART B (5 x 16 = 80 Marks)

11. (a) (i) Briefly explain automated manufacturing system and its classification. (8)

(ii) What is meant by manufacturing lead time, utilization, availability and work-in-process in a manufacturing system? (8)

(OR)

(b) (i) Explain the various reasons for automation in production system. (8)

(ii) Explain various levels of automation and control in a production plant. (8)

12. (a) (i) Briefly explain the basic structure of Optiz system of part classification and coding system. (12)

(ii) What are the benefits of computer aided process planning? (4)

(OR)

(b) (i) Briefly explain the general procedure of a retrieval CAPP system. (12)

(ii) List the various application of group technology in manufacturing. (4)

13. (a) (i) Briefly explain the different phases in shop floor control system. (12)

(ii) What are the disadvantages in manual collection and entry of data? (4)

(OR)

(b) (i) Briefly explain the structure of material requirement planning system. (12)

(ii) Explain the usage of magnetic strip in product identification? (4)

14. (a) Explain the construction features of coordinate measuring machine (CMM).

(OR)

(b) Briefly explain the machine vision technologies in industrial inspection.

15. (a) Explain the various components of flexible manufacturing system (FMS).

(OR)

(b) (i) Briefly describe the various benefits of flexible manufacturing system. (8)

(ii) Explain the switching network type of configuration in a distribute numerical control system. (8)

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