

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 92013

M.E. DEGREE EXAMINATION, DECEMBER 2013.

Elective

CAD / CAM

01PCD520 - DESIGN FOR CELLULAR MANUFACTURING SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is the philosophy of Group Technology (GT)?
2. What are the advantages of GT?
3. What is Cellular Manufacturing System (CMS)?
4. What is a neural network?
5. Differentiate between inter cell layout and intra cell layout.
6. List the types of machine cells and layouts.
7. Define the term "cell loading".
8. What is exceptional element in CMS?
9. Write any two benefits of GT in human aspect.
10. What is the need for computer in design of CMS?

PART - B (5 x 14 = 70 Marks)

11. (a) Write short notes on "issues in GT". (14)

Or

(b) What are the advantages of the GT manufacturing system over the traditional manufacturing system? (14)

12. (a) Explain, how to design a CMS by using genetic algorithm? (14)

Or

(b) Explain in detail the design of CMS by using the simulated annealing algorithm. (14)

13. (a) Write short notes on cost and non-cost based CMS models. (14)

Or

(b) Explain in detail the life cycle issues in CMS (14)

14. (a) Explain the various types of performance measures used in CMS. (14)

Or

(b) Write short notes on parametric analysis (14)

15. (a) Explain in detail the human aspects of CMS with suitable case. (14)

Or

(b) Explain the advantages of group using computer models in GT over conventional methods of grouping in GT. (14)

PART - C (1 x 10 = 10 Marks)

16. (a) Explain different types of parts classification and coding schemes with suitable example (10)

Or

(b) Describe production flow analysis method for the identification of part families. (10)