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First Semester M.Tech. Degree Examination, Dec.2013/Jan.2014
Concurrent Engineering for Manufacturing

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. How does push and pull affect the manufacturing environment? Explain the differences between a push and a pull for a new paradigm. Describe their relative affinities in brief. (10 Marks)
 - b. Explain in brief review of historical events that have occurred in manufacturing. (05 Marks)
 - c. Write a short note on process and methodologies. (05 Marks)
- 2
 - a. Explain in detail, product-life-cycle configuration management with the help of neat sketch. (10 Marks)
 - b. Define quality function deployment (QFD) and explain in brief the applications of QFD. (05 Marks)
 - c. Write a short notes on sequential versus concurrent engineering. (05 Marks)
- 3
 - a. Discuss the role of SWOT analysis in understanding and managing change. (10 Marks)
 - b. How reengineering play a pivotal role in the concurrent engineering process? (05 Marks)
 - c. Explain any five types of waste exist in all work activities in the organization. (05 Marks)
- 4
 - a. Explain in detail basic principles of concurrent engineering, and also mention some benefits of CE. (10 Marks)
 - b. List typical participants in virtual company. Mention any two definitions of concurrent engineering. (05 Marks)
 - c. Write a short note on components of concurrent engineering. (05 Marks)
- 5
 - a. Discuss the advantages of the system engineering approach to concurrent problem solving. (10 Marks)
 - b. List any five differences in manufacturing traits in craft, mass, lean, agile and virtual manufacturing processes. (10 Marks)
- 6
 - a. What are the various methods of representing conceptual models? Why do we prefer structure flow charts to describe a process instead of context diagram? (10 Marks)
 - b. Discuss in detail the foundation of information modeling. (10 Marks)
- 7
 - a. Briefly explain the following with reference to information modeling:
 - i) Process model class.
 - ii) Product model class.
 - iii) Specification model class. (10 Marks)
 - b. Write an explanatory note on key to Japanese success. (10 Marks)
- 8
 - Write a short note on any four of the following:
 - a. Experience of HONDA.
 - b. Product and process.
 - c. System engineering.
 - d. Change management methodology.
 - e. Manufacturing competitiveness.
 - f. CE in the European automobile industry. (20 Marks)