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QP Code : 6012

Duration : 3hrs

Maximum Marks:- 80

N.B.

1. Question no 1 is compulsory.
2. Answer any THREE out of remaining FIVE questions.
3. Answer to the question should be grouped and written together.

Q1] Attempt any four questions.

20

- a) Explain product life cycle with suitable example.
- b) Write a note on Man-Machine interaction.
- c) Explain the brain storming process.
- d) What is the importance of physiological and psychological factors at work?
- e) Explain Design for Maintainability.
- f) Write a note on creative thinking.

Q2] a) What is product architecture and its implications?

08

b) Discuss the various costs involved in product costing

06

c) Explain what is human engineering and ergonomics?

06

Q3] a) What are product specifications and how they are established?

08

b) What are the various ways to collect customer need information and how it is useful?

06

c) Write a note on Prototyping.

06

Q4] a) Discuss the impact of DFM decisions on overall costs, product quality and other factors. 08

b) Explain the role of design considering environmental issues?

06

c) Write a note on Robust design.

06

Q5] a) Explain value engineering and analysis with any suitable case study.

10

b) Explain the product development process in detail.

10

Q6] a) Explain the two stage concept selection methodology.

10

b) What is FMEA and what is the need & benefits of FMEA?

10
