

(3 Hours)

[Total Marks : 80]

Please check whether you have got the right question paper.

- N.B.:**
1. Solve any four questions.
 2. Assume suitable data if any.

1. Explain any four 20
 - A. ISO 1400 framework
 - B. Simultaneous engineering
 - C. What is digital mockup? State its benefits and list software use for its
 - D. Explain Product design for environment.
 - E. PLM Vision and Strategies.
2.
 - A) What do you mean by Design for X. How will you use design for X tools in the design process? 20
 - B) Explain useful life extension strategies. 20
3.
 - A) Explain the general framework of LCCA. 20
 - B) What is sustainable development? Explain role of science & technology in it. 20
4.
 - A) Discuss new product development process. 20
 - B) Explain cost analysis and life cycle approach in detail. 20
5.
 - A) Explain the strategies for recovery at the end-of-life cycle 20
 - B) What is the virtual product development process? Write its applications and advantages. 20
6.
 - A) With Suitable example explain various product life cycle phases. Explain importance and benefits of PLM. 20
 - B) Explain various reasons for implementation of PDM system. Explain various barriers for PDM implementation. 20