

Time: 3 hour

Max Marks:80

- Note: 1. Q1 is compulsory  
2. Solve any three from remaining

- Q1 A. Evolution of Models for Product Life Cycle Cost Analysis 20  
B. Importance & Benefits of PLM  
C. Explain Product design for manufacturability.  
D. What is PLM? State its need and scope and phases.  
E. What is digital mockup? State its benefits and list software used for it.
- Q.2 A. Explain the concept of New Product Development (NPD) and its Strategies. 20  
B. Explain Life Cycle Environmental Strategies and Considerations for Product Design.
- Q.3 A. Explain the general framework of LCCA. 20  
B. What is sustainable development? Explain role of science & technology in it.
- Q.4 A. List down at least ten reasons for implementing a PDM system and explain barriers to PDM implementation. 20  
B. Explain cost analysis and life cycle approach in detail.
- Q.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.
- Q.6 A. Explain Modeling and simulations in Product Design with suitable examples. 20  
B. Explain the process of Developing PLM Vision and PLM Strategy.