

Product Engineering (OE) Mechanical Engineering 3rd Year

UNIT I

1. Define Product Engineering
2. Briefly explaining about Project Management
3. Why is project management important?
4. What is Microsoft Project?
5. Write about Microsoft Project and facilities available in this software.
6. What is Collaborative Working and explaining with example
7. What is Team Work? explain with an example.
8. Define planning, organising, Controlling, Measuring.

UNIT II

1. Explain briefly about demand and supply
2. Write Uses of TRIZ in ideation
3. Write benefits of Digital Prototyping.
4. What is the need of documentation.
5. Explain importance of Design Documentation.
6. What is Design Process, explain in detail.
7. What are the different prototyping techniques.
9. Explain about Product development cycle
10. What are the stages of product life cycle?
11. Explain about Product Lifecycle Management (PLM)
12. List out the PLM softwares.
13. Write the benefits of product life cycle management.
14. What is Intellectual Property?

- 15 What is the Copyright act? Explain.
- 16 Advantages of Project management.
- 17 What are points to be considered for "road to better project management".
- 18 Explain Four C's of product design
- 19 Write about indian Intellectual Property Rights (IPRs).

UNIT III

1. What is Computer Aided Design (CAD)
- 2 What are the Elements of design
- 3 What is Ideation and different methods of innovation.
- 4 Explain briefly about Capturing Voice of the customer (VOC)
5. What is Design for manufacturing, explain.
- 6 Explain top down and Bottom up Design Methods
- 7 Explain Manufacturing and Engineering Bill of Materials (BOMs)
- 8 What are the advantages of Standardization?
- 9 What are the phases in product development process?
- 10 What is a Digital Prototyping?
- 11 Explain the need of prototypes.
- 12 Explain about low fidelity prototypes and high fidelity prototypes.
13. What is 3D design concepts? Explain.

UNIT IV

- 1 Explain, what is Design Documentation Requirements
2. Importance and benefits of design documentation
- 3 When do you need documentation and when do you not, explain.
- 4 Explain Design changes and Automation in Product development.

- 5 What is Visualization and how it is Extending Design Data.
- 6 What is the Purpose of Drawing?
7. What is the requirement of Drawing?
- 8 What are the element of good data visualization
- 9 What is automation? And advantages of automation.

UNIT V

- 1 List out rapid prototyping technologies.
2. Need - Development of Rapid Prototype systems.
- 3 Explain various Rapid Prototyping Technologies (RPT).
- 4 Write about Digital Prototyping Design
- 5 What are the prototypes used for?
6. What is Rapid prototyping.
- 7 Explain methodology of rapid prototyping.
- 8 Explain about Stereolithography prototyping.
- 9 Explain about Fused Deposition Modelling.