

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, April, 2017

Program Name: B.Tech Mechanical Engineering

Semester – 8th Semester

Course Name : Product Design & Development

Max. Marks : 100

Course Code : 50030752

Duration : 3 Hrs

No. of page/s:

Section A (5 questions of 4 Marks each)

1. Name four Industrial Design Theorist who are well-known in world for their contributions.
2. “Design as an educational discipline that unites arts and science and perhaps can go further” elaborate with examples.
3. Explain the role of “Literature Review & Survey” in Design Process.
4. Describe objective of Indian Design Act 2000.
5. Describe Design Research. Include & describe all steps involved in Design Research.

Section B (5 Questions of 8 marks each)

1. Explain the filing of design patent in India. Describe charges, norms, terms, cancellation policies & penalties.
2. Describe “Design Thinking” and it’s effect to improve society with examples.
3. Describe non designers role play in Industrial Design activity. Industrial Design changes mind sets and create Trend'- elaborate.
4. Describe Value Engineering & Value Analysis. Describe the difference. Differentiate Value from cost. Describe difference of Value Engineering with Industrial Design process.
5. Describe industrial design practice and parameters that influence the practice in industry.

Section C (Attempt 2 Question 20 Marks each)

6. Describe the development of industrial design and branching out to different specializations . Name few branches of Industrial Design and major activity.
7. Describe “Ergonomics” and their involvement in Product Design. Describe Anthropometry. Describe the usage of Anthropometry & Ergonomics in product Design.

OR

8. Describe sustainable design. Show some examples of non- sustainable products . show some sustainable design with sketch & describe the benefit of being sustainable.