



Code: 13A03809

R13/SS

B.Tech IV Year II Semester (R13) Regular & Supplementary Examinations April 2018

PRODUCT DESIGN

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Explain activity planning.
 - What is meant by interdisciplinary cooperation?
 - What is meant by updating and partial requirement list?
 - Briefly explain working structure.
 - How to abstract to identify essential problems in conceptual design?
 - Explain practical applications of working structure.
 - Write the steps in embodiment design.
 - What is meant by fault-free design?
 - Write the applications of mechanical connections.
 - What are the goals and limitations of adaptronics?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain in detail product development organizations.

OR

- 3 What role does basic technological research play in the product development process? Explain.

UNIT – II

- 4 Explain overall steps involved in task clarifications.

OR

- 5 Explain in detail the effective preparing design analysis task in a product development project.

UNIT – III

- 6 Explain practical applications of working structures in detail.

OR

- 7 Explain conceptual design with two basic case studies.

UNIT – IV

- 8 What are various principles of embodiment design explain each in detail?

OR

- 9 Explain design to ergonomics, production, assembly, recycling and maintenance.

UNIT – V

- 10 Explain in detail about mechanical connections with suitable cases studies.

OR

- 11 Explain about goals and limitations of mechatronics with suitable cases studies.
