



B.Tech IV Year II Semester (R15) Advanced Supplementary Examinations July 2019

PRODUCT DESIGN

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What is product cost?
 - (b) Write short note on team behavior.
 - (c) Write the difference between creativity and innovation in design.
 - (d) What is identification of requirement?
 - (e) Define the conceptual design.
 - (f) What is problem formulation?
 - (g) Define embedment design?
 - (h) How can you prepare fault free design?
 - (i) What are the Goals of MECHATRONICS in product design?
 - (j) List the limitations of mechatronics.

PART – B

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

UNIT – I

- 2 Explain below concepts related to design for manufacturing:
- (a) Scheduling.
 - (b) Project planning.

OR

- 3 Write about effective organization structures for product design.

UNIT – II

- 4 How do you prepare list of requirements for product? Discuss on partial requirements list.

OR

- 5 What is compiling the requirement list and updating requirement list? Explain.

UNIT – III

- 6 Explain different methods to define the problem in conceptual design.

OR

- 7 Develop a working structure for any two practical applications.

UNIT – IV

- 8 Explain the evaluation of embodiment design with an example.

OR

- 9 (a) Explain the importance of Ergonomics in product design.
(b) What is design for manufacturing? Explain.

UNIT – V

- 10 Discuss on architecture and terminology, goals and limitations of mechatronics.

OR

- 11 Explain ADAPTRONICS and its importance in present industrial revolution.

