

Code: 13A03809

R13/SS

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2018

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 meant by scheduling?
 - (b) Write the ingredients of product cost.
 - (c) Write the purpose of task clarification.
 - (d) What is meant by market study?
 - (e) What is meant by concept selection?
 - (f) Draw the schematic outline of a product life cycle.
 - (g) What are the components of embodiment design?
 - (h) What is meant by detailed design?
 - (i) Define the term mechatronics.
 - (j) Write the possible solutions for cam operated switches.

PART – B

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

UNIT – I

- 2 Explain in detail quality function deployment with suitable example..

OR

- 3 "Effective leadership is a function of three factors: the leader, the led and the situation". Discuss any two factors.

UNIT – II

- 4 What are the main stages of the design process? Discuss the steps involved in task clarification and its outcome.

OR

- 5 Describe the need analysis with suitable block diagram.

UNIT – III

- 6 What are the ingredients of conceptual design? Describe the function structure method with suitable example.

OR

- 7 Discuss the conceptual design step by step procedure for one handed household water mixing tap.

UNIT – IV

- 8 Explain the three sections of embodiment design. What are the three steps processes for product architecture?

OR

- 9 Discuss the importance, benefits and strategy for implementing the design for recycling.

UNIT – V

- 10 Discuss in detail the evolution of mechatronics system.

OR

- 11 Explain the development of adaptronics solution with suitable example.
