Code: 13A03809 **R13/SS**

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2017

PRODUCT DESIGN

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) What is scheduling?
(b) List out the phases involved in activity planning.
(c) What is QFD?
(d) Define quality and quantity.
(e) What is overall function?
(f) Give the aim of abstraction.
(g) Explain ergonomics briefly.
(h) Give the levels of safety measures.
(i) What are the limitations of mechatronics?
(j) What are the applications of adaptronics?

PART – B

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

UNIT – I

2 Explain the steps involved in general problem solving process. Explain in detail the general decision process with a neat flow chart.

OR

3 (a) What will be a product is successful?
(b) What are the three main steps involved in creating a network plan?

UNIT – II

4 Briefly explain the importance of task clarification. What method is used to support the preparation of list of requirements?

OR

5 What are the practical applications of 'Requirement list'?

UNIT – III

6 Explain how problem formulation is broadened.

OR

7 What are the practical applications of function structures? Explain.

UNIT – IV

8 Write a short note on design against corrosion.

OR

9 Write check list for embodiment design. What are the basic rules of embodiment design?

UNIT – V

10 Explain the basic architecture of mechatronics. What are the goals of mechatronics?

OR

11 Explain the concept of development of adaptronics solutions. Give an example.

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