

Seat No.	
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B.E. (Mechanical) (Part - IV) (Revised) (Semester - VII)**Examination, April - 2018****INDUSTRIAL PRODUCT DESIGN****(Elective - II)****Sub. Code: 67834****Day and Date : Saturday, 28 - 04 - 2018****Total Marks : 100****Time : 02.30 p.m. to 5.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the Right indicate full marks.
 - 3) Draw neat sketches wherever necessary.

Q1) a) Explain the challenges of product development. [8]

b) Explain the concept of Market research and market survey. [8]

OR

b) Explain quality aspect of product design. [8]

Q2) a) Explain the Steps in concept development process. [8]

b) Explain the process of product planning. [8]

OR

b) Explain the process of concept selection. [8]

Q3) a) Explain the types of product architecture with examples. [8]

b) Explain the use of computerized data management process. [10]

OR

b) Explain the functional elements of wrist watch with a neat diagram. [10]

P.T.O.

- Q4) a) Explain the types of prototyping in product design. [8]
b) What are the principles in Design for Manufacturing and Assembly (DFMA). [8]

OR

- b) Explain the concept of value engineering. [8]

- Q5) a) Explain the application of anthropometric data in ergonomic design. [8]
b) Explain the following with respect to controls : [10]
i) Design of foot control levers.
ii) Design of machine displays.

OR

- b) Explain the Man-Machine relationship system. [10]

- Q6) a) Explain an approach to industrial design. [8]
b) Explain the safety precautions to be followed in cement industry. [8]

OR

- b) Explain the features of ISO 14000 environmental management system. [8]

