Total No. of Questions : 6]

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SEAT No. :

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BE/Insem./APR-175

B.E. (Mechanical Engineering) PRODUCT DESIGN AND DEVELOPMENT (2015 Course) (Semester - II) (Elective - IV) (402050C)

Time : 1 Hour] Instructions to the candidates: [Max. Marks :30

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data if necessary.
- Q1) a) What is meant by Product design explain various phases of Product design.[6]
 - b) Differentiate between product design and product development. [4]

Q2) a) Which are the three "S" of product design and what are their advantages in product development process. [4]

OR

- b) What is House of Quality, explain how it is used in the Product development process. [6]
- **Q3)** a) Explain Basic method of mission statement and technical questioning in product development process with template and state its advantages.[6]
 - b) Draw and explain Kano-Model for customer satisfaction with suitable [4]

OR

- Q4) a) Explain the various phases of S-Curve used in technology forecasting.[5]
 - b) Explain the concept of market segmentation and how it is useful in Product design. [5]

P.T.O.

- Q5) a) List advantages and disadvantages of brainstorming methods for idea generation. [4]
 - b) Which are the methods for product information gathering. [6]

[5]

[5]

OR

Q6) a) Explain FAST method for development of product function.

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b) Explain concept selection process.