## BE/Insem./APR-175

## B.E. (Mechanical Engineering) <br> PRODUCTDESIGNAND DEVELOPMENT (2015 Course) (Semester - II) (Elective - IV) (402050C)

## Time : 1 Hour]

[Max. Marks :30
Instructions to the candidates:

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.
b) $\bowtie$ Differentiate between product design and product development.

OR
Q2) a) Which are the three " $S$ " of product design and what are their advantages in product development process.
b) What is House of Quality, explain how it is used in the Product development process.

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 example.

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.

# Q5) a) List advantages and disadvantages Ob brainstorming methods for idea 

 generation.b) Which are the methods for product information gathering.

Q6) a) Explain FAST methodfor development of product function.
b) Explain concept selection process.

