

Total No. of Questions :12]

SEAT No. :

P3315

[4959]-36

[Total No. of Pages :2

B.E. (Mechanical Engineering)
PRODUCT DESIGN AND DEVELOPMENT
(2008 Course) (Semester -I) (402044B) (Elective -I)

Time : 3 Hours

[Max. Marks :100]

Instructions to the candidates:

- 1) *Answer three questions from section I and three questions from section -II.*
- 2) *Answer to the two sections should be written in separated books.*
- 3) *Figure to right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

SECTION -I

- Q1)** a) Explain morphology of product design. [8]
b) State rapid prototyping methods and Explain any one method [8]

OR

- Q2)** a) Explain standardization and simplification in product design. [8]
b) Differentiate between product verification and product validation. [8]

- Q3)** a) Explain Technology S -Curve. [8]
b) Explain customer needs. [8]

OR

- Q4)** a) Explain economic analysis of product. [8]
b) Explain customer population and market segmentation. [8]

- Q5)** a) Explain concept generation. [9]
b) Explain FMEA. [9]

OR

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- Q6)** a) Explain concept selection process [9]
b) Explain substract and operate procedure. [9]

SECTION -II

- Q7)** a) Explain product Teardown process. [8]
b) Explain product portfolio [8]

OR

- Q8)** a) Explain Bench marking. [8]
b) Explain product Architecture. [8]

- Q9)** a) Explain design for manufacture. [8]
b) Explain product testing. [8]

OR

- Q10)**a) Explain design for Assembly. [8]
b) Explain design for environment. [8]

- Q11)**a) Explain product Life cycle. [9]
b) Explain product data and product work flow. [9]

OR

- Q12)**a) Explain elements of PLM. [9]
b) Explain Technologies used in various phase of product life cycle. [9]

