

Total No. of Questions : 8]

SEAT No. :

P3119

[Total No. of Pages : 2

[5354]-609

B.E. (E & TC) (End Semester)

ELECTRONIC PRODUCT DESIGN

(2012 Pattern) (Elective - II)

Time : 2 ½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer all questions.
- 2) Figures to the right side indicate full marks.

- Q1)** a) Explain five elements of successful design in detail. [10]  
b) What is need of prototyping? [5]  
c) Write in brief about risk management in software testing. [5]

OR

- Q2)** Write short notes on any four : [20]
- i) Vibration & shock testing.
  - ii) Importance of energy coupling & grounding.
  - iii) Need of filtering & shielding.
  - iv) Ergonomics & Aesthetics of the product.
  - v) IP standards in packaging.

- Q3)** a) Explain different types of termination methods in PCB designing. [8]  
b) Explain the need of ESD protection in PCB designing. [5]  
c) Explain the need of multilayer PCB design in detail. [5]

OR

- Q4)** a) Explain microstrip & stripline geometry for PCB design with neat diagrams & derive the equations for characteristic impedance. [10]

P.T.O.

- b) Write short note on any two of the following : [8]
- i) Image plane
  - ii) Aspect Ratio
  - iii) Functional Partitioning.

- Q5)** a) Explain the significance of EMI & EMC in product testing. [8]
- b) Compare active and passive components with example. [4]
- c) What are different testing methods to ensure quality of product? [4]

OR

- Q6)** a) What are the parameters in designing & selection of D to A converter?[8]
- b) What is significance of testing & debugging in product design. [8]

- Q7)** a) What is role of documentation in quality product design. [8]
- b) What are the methods of documentation? [8]

OR

- Q8)** a) Explain bill of material for digital counter. [8]
- b) Write short note on any two of the following : [8]
- i) Presentation of documents.
  - ii) Accountability & Liability in documentation.
  - iii) Vishal Techniques of documentation.

