

Total No. of Questions : 8]

SEAT No. :

P3050

[5154]-619

[Total No. of Pages : 2

B.E. (Electronics & Telecommunication)

ELECTRONIC PRODUCT DESIGN

(2012 Pattern) (End Sem) (Elective - II) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Attempt Q.No.1 or Q.No.2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6, Q.No.7 or Q.No.8.*
- 2) *Figures to the right indicates full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable additional data if necessary.*
- 5) *Use of non programmable calculator is permitted.*

- Q1)** a) Explain man machine dialogue. **[8]**
b) What are the issues while formulating a test plan? **[8]**
c) What are the metrics in software designing? **[4]**

OR

- Q2)** a) What is shielding? Explain with neat diagrams. **[8]**
b) What are the performance and efficiency measures in hardware testing? **[6]**
c) Explain different software models with advantages and disadvantages. **[6]**

- Q3)** a) What is bypassing and decoupling issue in PCB? Explain with suitable example. **[6]**
b) What are the grounding methodologies? Explain with suitable sketches. **[6]**
c) Write in brief about routing topologies. **[6]**

OR

- Q4)** a) What is functional partitioning? Explain critical frequency concept. **[8]**
b) What are the techniques used in ESD protection. **[6]**
c) Calculate the characteristic impedance for a stripline geometry when the thickness of PCB laminates is 1.6mm and its relative permittivity is 3.2. The width of embedded track is 1mm and its thickness is 35 microns. **[4]**

P.T.O.

- Q5)** a) What is role of A to D converter in product design? Explain the parameters while designing A to D converter. [6]
b) What is integration, verification and validation in electronic product designing? [6]
c) What is an operational amplifier explain with typical application. [4]

OR

- Q6)** a) What is testing and debugging? Explain the steps in debugging. [8]
b) What are electromechanical components? Explain any two electromechanical components. [8]

- Q7)** a) Define documentation and explain different types of documentation. [6]
b) What is accountability and liability? [6]
c) Write in brief on presentation and preservation of documents. [4]

OR

- Q8)** a) What is the importance of bill of material? Explain bill of material with suitable example. [8]
b) Explain the layout of documentation. [8]

