

Total No. of Questions :8]

P3337

SEAT No. :

[Total No. of Pages :2

[5670]-606

B.E. (E&TC)

ELECTRONIC PRODUCT DESIGN
(2015 Pattern) (End Sem.) (Elective-II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates.

- 1) *Answers Q.1 or Q.2 and Q.3 or Q.4 and Q.5 OR Q.6, and Q.7 OR Q.8.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Use of calculator is allowed.*
- 5) *Assume suitable data, if necessary*

- Q1)** a) How to formulate specifications? Explain difference between Specifications and requirements with suitable example. [7]
b) Explain in details the factors affecting packaging of electronic product. [6]
c) Mention different software model. Describe waterfall model of software development with suitable diagram. [7]

OR

- Q2)** a) Explain successful design elements in electronic product design. [7]
b) Explain the advantage and guidelines of system partitioning. [6]
c) What is embedded and real time software? Explain its significance in product design. [7]

- Q3)** a) Discuss PCB Layout design rules for analog circuits, digital circuits and high speed circuits. [7]
b) Explain design techniques for ESD Protection and cross talk. [7]
c) Write short note on Bypass and Decoupling capacitors. [4]

OR

- Q4)** a) Explain configurations of routing topologies in PCB layout designing. [7]
b) Explain different grounding methodologies and compare them. [7]
c) Write short note on functional partitioning. [4]

P.T.O.

- Q5)** a) What are the steps of debugging? [8]
b) Mentioned steps for troubleshooting of analog circuits and digital circuits. Also discuss check list for power circuits during trouble shooting. [8]

OR

- Q6)** a) State the important parameters to be considered while selecting passive, active and switching components. [8]
b) Compare different types of ADCs with respect to types, resolution, conversion time, power consumption, non linearity and error. [8]

- Q7)** a) With the help of suitable example explain how the bill of material is prepared. [8]
b) Explain the need of documentation? [8]

OR

- Q8)** a) Discuss about records, accountability and liability with respect to documentation. [8]
b) Define documentation. What are the different types of documents to prepare by the electronic product manufacturer? [8]

