Total No. of Questions : 8]

SEAT No. :

P3092

[Total No. of Pages : 2

[5354]-582
B.E. (Electronics) (Semester - I)
ELECTRONIC SYSTEM DESIGN
(2012 Pattern)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates :

1) ***Answer Q.1 or Q.2, Q.3 or Q4, Q.5 or Q6, Q.7 or Q.8.***
2) ***Figures to the right indicate full marks.***
3) ***Use of electronic pocket calculator is allowed.***
4) ***Assume Suitable data if necessary***

Q1) a) Explain the bath tub curve for reliability indicating all its regions. Also explain how failure rate can be reduced in different regions of bathtub curve. **[7]**

b) Interpretation of DAC specifications from design view point. **[7]**

c) Explain R&D and Engineering Prototypes in details. **[6]**

OR

Q2) a) Explain instrumentation amplifier with it's different specifications. **[7]**

b) Factors affecting choice of Microcontroller for Any One application with Case study of that application. **[7]**

c) What are the different LED configurations? Give suitable example for the same? **[6]**

Q3) a) What are the different approaches to development of application software for Electronic Product. **[8]**

b) What are the different factors affecting on the choice between Assembly & High Level language? **[8]**

P.T.O.

OR

Q4) Explain following approaches in development of application software for electronic product. **[16]**

a) Top-Down approach

b) Bottom-Up approach

c) Modular Programming

d) Water fall Model

Q5) a) Explain different design consideration while designing PCB for high speed digital circuits? **[8]**

b) Define crosstalk? What should be the remedy to minimize crosstalk? **[8]**

OR

Q6) a) What are the testing standards for EMI/EMC? **[8]**

b) What is the signal integrity? Justify the significance of SI. How can it be ensure in high-speed circuits? **[8]**

Q7) a) What are the features & limitations of analog CRO, DSO, Logic Analyzer & Mixed signal Oscilloscopes in finding hardware/software faults? **[12]**

b) What are the EMI/EMC testing standards? **[6]**

OR

Q8) a) Explain environmental testing? What is the need of environmental testing? What are the different factors needed to be test while environmental testing. **[12]**

b) What are the compliances for the EMI/EMC? **[6]**

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