

Total No. of Questions : 8]

SEAT No. :

P1865

[4859]-1048

[Total No. of Pages : 2

B.E. (Electronics)

ELECTRONICS SYSTEM DESIGN
(2012 Course) (Semester-I) (End Sem) (404202)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

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

- Q1)** a) Explain industrial product design with the help of case study in detail.
Explain their classification. **[8]**
- b) Explain the following terms of DAC: **[6]**
- i) Resolution.
 - ii) Maximum sampling rate.
 - iii) Total harmonic distortion and noise.
- c) What are the factors affecting on selection of buses and protocols in high speed electronics product. **[6]**

OR

- Q2)** a) Explain the different soldering techniques used in large scale production and high reliability product. **[8]**
- b) What are different DAC techniques? Compare on the basis of accuracy. **[6]**
- c) Design and explain Interfacing of LCD with microcontroller. **[6]**
- Q3)** a) Explain different stages of software development in electronic product. **[8]**
- b) Write a note on debugging tools and techniques for software design. **[8]**

OR

P.T.O.

- Q4)** a) Explain the factors affecting on the choice of assembly language and high level language with example. [8]
- b) Write note on: [8]
- i) Compiler.
- ii) Simulator.

- Q5)** a) What are the different PCB Design issues for high speed integrated circuits. Explain in detail. [10]
- b) Explain the importance of shielding and grounding. [8]

OR

- Q6)** a) What are the different PCB Design issues of analog and mixed signal Circuits. Explain in details. [10]
- b) List different EMI/EMC standards. Explain its important. [8]

- Q7)** a) Explain how debugging of electronics circuit is carried out by logic analyzer. [8]
- b) Explain with suitable example of vibration testing. [8]

OR

- Q8)** a) Specify with justification the choice of environmental testing to be carried out on following electronic product: [8]
- i) Washing Machine.
- ii) ECG.
- b) Write a notes on: [8]
- i) Digital storage oscilloscope.
- ii) Mixed single oscilloscopes.

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