Total No. of Questions : 8]

SEAT No. :

P2006

[Total No. of Pages : 2

[5059] - 602
B.E. (Electronics)
ELECTRONICS SYSTEM DESIGN
(2012 Pattern) (End Semester)

Time : $2\frac{1}{2}$ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
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 electrical, mechanical and environmental specifications of electronic product with example. **[8]**

b) Explain the need of Vref in ADC. Explain the factors to be considered while selecting Vref. Discuss on error budget depending on Vref and no. of output bits. **[6]**

c) Design and explain interfacing of LCD and LED with microcontroller. **[6]**

OR

Q2) a) Discuss in detail the different stages of an electronic product development. Explain the implications of skipping a particular stage in development. **[8]**

b) What are the specifications of DAC? Explain resolution with example. **[6]**

c) Explain the factors affecting on choice of Microcontroller for particular application with case study of one application. **[6]**

P.T.O.

Q3) a) Explain different phases of software design. List the common bugs and how to overcome these bugs? **[8]**

b) List the features of ICE & IDE simulators. **[8]**

OR

Q4) a) Explain the factors affecting on the choice of assembly language and high level language with example. **[8]**

b) Write a short notes on assembler and cross compilers. **[8]**

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 is the signal integrity? Justify the significance of SI. How can it be ensure in high speed circuits? **[10]**

b) Explain different types of EMI? How it can be minimized? **[8]**

Q7) a) Why environmental testing is necessary? How it is carried out? Explain different factors in detail. **[8]**

b) Explain with suitable example of vibration testing. **[8]**

OR

Q8) a) What are the features & limitations of analog CRO and DSO for fault findings? **[8]**

b) Carried out DC analysis of any circuit, comment on the stability. **[8]**

✦✦✦✦