BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VII ELECTRONIC : : SUMMER - 2022
SUBJECT : ELECTRONIC SYSTEM DESIGN

Day : Wednesday
Date : 01-06-2022

S-13395-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat diagrams **WHEREVER** necessary.

Q.1 How will you signal condition and interface strain guage for pressure measurement. Draw & explain with suitable circuit diagram. **(10)**

OR

Q.1 Justify the significance of V_{ref} in for ADC. Calculate the following: **(10)**
i) For 8-bit ADC, if step size is 1.2, no of steps?
ii) For 8-bit ADC, if $V_{ref} = 2.56$, what is V_{in} and step size.
iii) for 10-bit ADC, if step size in 1.25, what is V_{ref} ?
iv) For 8-bit ADC, calculate D_0 D_7 if $V_{in} = 1.7V$. ($V_{ref} = 2.56$)

Q.2 Discuss the following protocols in brief: i) LIN ii) Flexray **(10)**

OR

Q.2 With a neat diagram explain interfacing of HB LED to any microcontroller. **(10)**

Q.3 Explain the following International standard in detail. **(10)**
i) IEEE ii) FCC

OR

Q.3 What is EDA tool?Describe the features and advantages of EDA tool. **(10)**

Q.4 Explain the following analysis: **(10)**
i) AC and DC analysis ii) Sensitivity analysis

OR

Q.4 Enumeratee the testing and fault finding features of Logic Analyzer. **(10)**

Q.5 State the need for environmental testing with temperature, humidity and low pressure. **(10)**

OR

Q.5 Explain the cooling approaches in an electronic system. **(10)**

Q.6 Justify the need of various types grounding necessary for electronic system. **(10)**

OR

Q.6 Explain the PCB design practices for analog and mixed signal circuits. **(10)**

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