P4349

[5461] - 209

B.E. (E & TC) (Semester - I) (Elective - II)
ELECTRONIC PRODUCT DESIGN
(2012 Pattern)

Time :2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:

1) *Attempt Q.1 or Q.2, Q.3or Q.4, Q.5or Q,6, Q7or Q8.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicates Full marks.*
4) *Use of Non programmable calculator is permitted.*
5) *Assume suitable data, if necessary.*

Q1) a) Explain man machine dialogue. **[8]**

b) Explain in detail the need of Prototyping. **[6]**

c) What is real time software ? Explain its significance in product design with example. **[6]**

OR

Q2) a) Explain the factors to be considered for packaging of electronic products. **[8]**

b) How the specifications are formulated. Explain the difference between specifications and requirements. **[8]**

c) List and explain the different commonly identifiable limitations of software. **[4]**

Q3) a) What is bypassing and decoupling issues in PCB? **[8]**
Explain with suitable example.

b) What are the grounding methodologies? **[6]**
Explain with suitable diagram.

c) Explain the techniques for ESD protection. **[4]**

OR

Q4) a) Discuss the PCB layout design rules for analog circuits and digital circuits. **[8]**

b) Explain the need of functional partitioning on PCB with diagram. **[6]**

c) Explain the need of multilayer PCB design in detail. **[4]**

Q5) a) Explain the significance of EMI & EMC in Product testing. **[8]**

b) What is debugging ? Explain the steps of debugging. **[8]**

OR

Q6) a) Compare the conducted EMI with radiated EMI. **[8]**

b) Enlist the important parameters to be considered while selecting passive, active and switching components. **[8]**

Q7) a) Define the documentation and explain different types of documentations. **[8]**

b) What is the importance of Bill of Material? Explain the Bill of Material with suitable example. **[8]**

OR

Q8) a) What is accountability and liability with respect to product documentation? **[8]**

b) Explain the layout of documentation. **[8]**

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