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B.E. (E & TC)

ELECTRONIC PRODUCT DEVELOPMENT

(2019 Pattern)(Semester - VII) (404185B) (Elective - IV)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates :

    1)   *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*

    2)   *Neat diagrams must be drawn wherever necessary.*

    3)   *Figures to the right indicates full marks.*

    4)   *Use of electronic pocket calculator is allowed.*

    5)   *Assume suitable data if necessary.*

Q1) a)   List & Explain different commonly identifiable limitations of the software.

                                                                  [9]

    b)   Explain the concept of risk abatement and failure prevention.   **[9]**

OR

Q2) a)   What are the features of good programming practices?   **[5]**

    b)   Explain the term user interface w.r.t. software.   **[5]**

    c)   What is real time software? Explain its significance in product design with example.   **[8]**

Q3) a)   Define & Explain following terms associated with PCB Design.   **[9]**

      i)   EMI (Electromagnetic interference)

      ii)   EMC (Electromagnetic compatibility)

      iii) ESD (Electrostatic discharge)

    b)   State & Explain cooling techniques.   **[8]**

OR

Q4) a) State & Explain types of shielding techniques. **[9]**

b) What are grounding methodologies? Explain with suitable sketches. **[8]**

Q5) a) Explain the different methods of product debugging? **[9]**

b) Explain how integration validation and verification support engineering development. **[9]**

OR

Q6) a) Define & Explain concept of conducted EMI & radiated EMI. **[9]**

b) Compare different types of ADC's with respect to parameters such as resolution, conversion time, power dissipation error. **[9]**

Q7) a) Explain the visual technique of documentation. **[8]**

b) Explain the following terms with respect to documentation. **[9]**

   i)   Records

   ii) Accountability

   iii) Liability

OR

Q8) a) Define documentation, what is need of documentation? Explain different types of documentation. **[9]**

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

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