

Total No. of Questions : 8]

SEAT No. :

P2024

[Total No. of Pages : 3

[5059] - 629

B.E. (Electronics and Telecommunication Engineering)
(Elective - II(B))

ELECTRONIC PRODUCT DESIGN
(2012 Pattern)

Time : 2.30 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 indicate full marks.*
- 4) *Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
- 5) *Assume suitable data, if necessary.*

- Q1)** a) Explain different types of Energy coupling mechanisms in brief. [8]
b) Explain how mapping of functions to hardware is done in architectural design. [6]
b) List and explain different commonly identifiable limitations of software.[6]

OR

- Q2)** a) Explain filtering actions by frequency selective filters, common mode filters and amplitude selective filters. [7]
b) Explain the concept of coupling and cohesion with respect to partitioning of a system. [6]
c) Discuss about the development plan of risk abatement in software development. [7]
- Q3)** a) Explain with neat diagrams, the different considerations for effective image planes. [8]
b) Explain the need of functional partitioning on PCB. Also explain how it is effectively done? [8]

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OR

Q4) Define/Explain the following terms associated with PCB design. **[16]**

- a) Containment
- b) Electromagnetic interference (EMI)
- c) Electromagnetic compatibility (EMC)
- d) Immunity
- e) Susceptibility
- f) Suppression
- g) Electrostatic discharge (ESD)
- h) Transmission modes of RF energy

Q5) a) With the help of suitable examples explain how the equipment are important for effective troubleshooting and debugging. **[8]**

b) Discuss tips for troubleshooting of analog circuits and digital circuits. Also discuss the check list for powering circuits during troubleshooting and debugging. **[8]**

OR

Q6) a) With respect to debugging process, explain the different ways of characterization of component or problem. **[8]**

b) Explain how simulation, prototyping and parametric testing support the engineering development, system integration and training. **[8]**

Q7) a) List types of documents, their specific subtypes. Also explain their specific use and format. **[12]**

b) Discuss about records, accountability and liability with respect to documentation. **[6]**

OR

- Q8)** a) Explain role of audience in documentation. [8]
- b) Write short notes on following documents.
- i) Engineering notebook. [5]
- ii) Drawing and schematic. [5]

