

Total No. of Questions : 8]

SEAT No. :

P5569

[Total No. of Pages : 2

[5561] - 257

B.E. (E & TC) (Semester - I)

Electronic Product Design

(2012 Pattern) (Elective - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Attempt 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 Non programmable calculator is permitted.
- 5) Assume suitable data, if necessary.

**Q1)** a) What is techno-commercial feasibility? Establish techno-commercial feasibility of any one electronic product. [10]

b) What is design specifications? Enlist any four specifications of any one electronic product. [6]

c) What is good programming practice. [4]

OR

**Q2)** a) Define ergonomics. Explain various design consideration with respect to ergonomics. [10]

b) What are the performance and efficiency measures in hardware design. [6]

c) What is real time software? Explain its significance in product design with example. [4]

**Q3)** a) Explain the need of functional partitioning on PCB with diagram. [9]

b) Explain with diagram, the concept of star ground in PCB design. [9]

OR

P.T.O.

**Q4)** Explain the following terms associated with PCB design. [18]

- a) EMI.
- b) EMC.
- c) Aspect ratio.
- d) Electrostatic discharge.
- e) Ground plane.
- f) Supply plane.

**Q5)** a) What is operational amplifier? Explain any four application of operational amplifier. [8]

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

OR

**Q6)** a) Enlist the important parameters to be considered while selecting passive, active and switching components. [8]

b) Compare active and passive component with examples. [4]

c) What are the different methods to ensure the quality of product? [4]

**Q7)** a) How the documents are preserved? What are the methods of preservation of documents? [8]

b) What is accountability and liability with respect to product documentation? [8]

OR

**Q8)** a) Explain different types of documentations. [8]

b) Explain the role of documentation in quality of product design. [8]

