

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]**

