

(3 Hours)

[Total Marks: 80]

- N.B:** (1) Question No.1 is compulsory.
 (2) Solve any three out of remaining questions.
 (3) Assume suitable data if necessary.

Q.1 Solve any Four

- a. What are the issues while formulating a test plan? **05**
- b. Explain the phases of new product development. **05**
- c. What are the performance and efficiency measures in hardware testing? **05**
- d. Draw and label the microstrip geometry for PCB design. **05**
- e. What is the difference between active and passive component? **05**

- Q.2**
- a. Explain waterfall model of software development life cycle. **10**
 - b. Explain how simulation, prototyping and parametric testing support the engineering development, system integration and training. **10**

- Q.3**
- a. State clearly the limitations and advantages of the Spiral model in EPD. **10**
 - b. Design the front panel of a digital multimeter by taking care of ergonomics and aesthetic design considerations. **10**

- Q.4**
- a. What are the different steps in hardware designing of an electronic product? What is the difference between system requirement specifications and design specifications? **10**
 - b. What is the roll of documentation in quality product design? **10**

- Q.5**
- a. What is integration, verification and validation in Electronic Product Designing? **10**
 - b. How to handle EMI/EMC issues in an Electronic Product? **05**
 - c. What is the role of A to D converter in product designing ? **05**

Write short note on any four

- Q.6**
- a. Need of Prototyping. **05**
 - b. Image Plane. **05**
 - c. Different electrical infrastructure considerations. **05**
 - d. Different grounding methodologies. **05**
 - e. Risk management in software testing. **05**