

26/5/2025

EES: TE sem VI Reg. C'scheme Summer 2025

Duration: 3hrs

[Max Marks:80]

- N.B. : (1) Question No 1 is Compulsory.
 (2) Attempt any three questions out of the remaining five.
 (3) All questions carry equal marks.
 (4) Assume suitable data, if required and state it clearly.

- 1 Attempt any **FOUR** [20]
- a Describe the major challenges involved in electronic product development. [05]
- b Explain Indian and international standard for product compliance. [05]
- c Explain black box, white box and grey box testing in hardware testing. [05]
- d What are the common debugging and troubleshooting techniques used in electronic product testing? [05]
- e What do you understand by good programming practice and how it is achieved? [05]
- 2 a Describe the customer discovery process and explain how identifying value proposition helps in achieving product-market fit. [10]
- b Explain the stages of electronic product development. How do these stages support customer-centric product development? [10]
- 3 a Explain functional design and architectural design. Compare functional model and architectural model. [10]
- b Explain the concept of Coupling and cohesion with respect to partitioning of the system. [10]
- 4 a Classify the different software development models. Explain waterfall model with proper diagram. [10]
- b Explain types of software, metrics & software limitations, risk abatement & failure prevention. [10]
- 5 a Define EMI and EMC. Illustrate the impact of EMI and EMC on product design and compliance. [10]
- b What do you mean by characterization of Electronic components? Discuss the working, process of characterization and fault diagnosis of operational amplifier. [10]
- 6 a What is documentation and why is it needed? Explain the documentation types, methods of documentation and layout of documentation. [10]
- b Explain steps in preparation, presentation & preservation of documents. [05]
- c Discuss about records, accountability and liability with respect to Documentation. [05]
