

Duration: 3Hours

Total Marks: 80

- N.B.:** (1) **Question No. 1 is Compulsory.**
(2) **Attempt any three questions out of the remaining five.**
(3) **Each question carries 20 marks and sub-question carry equal marks.**
(4) **Assume suitable data if required.**

- Q.1 Solve any Four from the following. 20**
- a What are different classes of electronic products give any one suitable example for each class?
 - b How does the V Cycle model differ from the waterfall model?
 - c Explain the standard procedure of a Quotation meeting.
 - d Discuss about records, accountability and liability with respect to Documentation.
- Q.2 a Explain the steps of electronic product design. 10**
b Explain the main design considerations while designing Data Acquisition System. 10
- Q.3 a What are the product development challenges? Explain in details. 10**
b How to handle EMI/EMC issues in an Electronic Product? 10
- Q.4 a Compare a Functional Design and Architectural Design for a Smartphone. 10**
b Explain black box, White box and grey box testing compare the same as per the performance of each. 10
- Q.5 a What is operational amplifier? Explain any four applications of operational amplifier. 10**
b Discuss tips for troubleshooting of analog circuits and digital circuits. Also discuss the checklist for powering circuits during troubleshooting and Debugging. 10
- Q.6 a What is the importance bill of material? Explain bill of material with suitable example. 10**
b Explain the contents of service manual, instruction manual & user manual. 10
