

List of Questions from sub -module 4.3 Testing

1. Discuss various VLSI technology trends that affects testing.
2. Classify VLSI testing and explain each type in details. Hence explain AC parametric testing
3. In electrical parametric testing , explain what all tests are included in typical test program. Hence explain DC parametric testing in details.
4. Explain what role testing economics play on the quality of VLSI devices
5. Explain the terms : a) Law of diminishing returns b) Benefit cost ratio c) Rule of ten d) Process yield

List of Questions from sub -module 5.1 SOI Technology

1. Explain various features of SOI technology w.r.t bulk Si technology
2. Discuss processing steps for fabricating SOI wafers using SIMOX and bounded SOI technique
3. Discuss processing steps for fabricating SOI wafers using Smart Cut technique
4. Compare PD SOI and FD SOI based on their structure , merits , limitations and applications.

List of Questions from sub -module 5.2 GaAs Technology

1. Discuss the process steps for a simple mesa isolated MESFET.
2. Explain 3 Digital technologies based design approaches for VLSI GaAs circuits with their merits and demerits.
3. Discuss the process steps for an etched-channel E/D technology.
4. Why there is a need for a Self –aligned source /drain structures in MESFETS. Hence explain any one technique for making Self –aligned source /drain contacts.
5. Write short note on MMIC technologies.