

Atal Bihari Vajpayee Indian Institute of Information Technology & Management, Gwalior

EE404: Integrated Circuit Technology

Minor Examination (Session 2024–25)

Maximum Time: 90 Minutes

Max Marks: 30

Note: Attempt all questions. Figures must be drawn wherever necessary.

1. Explain the oxidation process in IC fabrication. Distinguish between dry and wet oxidation. (6 Marks)
2. What are the various types of crystal defects? Discuss their impact on IC performance. (6 Marks)
3. Derive the expression for drain current in saturation region of MOSFET. (6 Marks)
4. Explain the role of dielectric materials in ICs. Give examples of commonly used dielectrics. (6 Marks)
5. Write short notes on: (a) Etching techniques (b) Chemical Mechanical Polishing (CMP) (6 Marks)