

**2006 CALICUT UNIVERSITY**  
EIGHTH SEMESTER B.TECH ENGINEERING DEGREE EXAMINATIONS  
**MICRO ELECTRONIC TECHNOLOGY**  
(ELECTRONICS COMMUNICATION ENGINEERING)

JUNE 2006

TIME::3 HOUR  
MARK:100

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ANSWER ALL QUESTIONS

**PART A [8\*5=40]**

1. 1 Explain preoxidation cleaning.
- 2 What are the types of photoresists ? Which is mostly used ? Why.'
- 3 How is junction isolation done ?
- 4 When and where multilevel metallization used ?
- 5 Write a note on early bipolar processes.
- 6 What are the effects of hot carriers in 13,11'?
- 7 What are the design rules for pads in VLSI design ?
- 8 How is MOSFET laid out in VLSI design ?

**PART B [15\*4=60]**

11. 1 What is optical lithography ? How is Sillltjlation of optical projection lithography done  
Or
- 2 Describe (i) wet etching and (ii) ion etching.
- III. 1 flow is simulations of LOCOS done ? Explain.  
Or
- 2 Where is (i) Schott.kv contact used ? (ii) implanted ojuuic cunt.act used ? Describe.
- IV. I Explain the p well process with neat sketches.  
Or
- 2 .Explain the sequence of BICIMOS fabrication.
- V. I Describe the fundamentals of VI SI design.  
Or
- 2 How is inverter layout carried out ? Explain with neat sketches.

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