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Question Paper Code: 52171

M.E. DEGREE EXAMINATION, DECEMBER 2015

First Semester

VLSI Design

15PVL101 - VLSI TECHNOLOGY

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) (i) Explain silicon shaping with necessary diagrams. (10)
- (ii) List out and explain processing considerations of silicon wafer. (10)

Or

- (b) Discuss oxidation techniques and systems with necessary graphs and also explain the oxide properties. (20)
2. (a) Explain optical resists, contact printing and projection printing of optical lithography. (20)

Or

- (b) Explain relative Plasma etching techniques and equipments with necessary diagrams. (20)
3. (a) (i) Discuss about deposition process. (10)
- (ii) Explain Flick's one dimensional diffusion equations and discuss the most commonly used solutions. (10)

Or

- (b) Explain Furnace annealing and Rapid thermal annealing with necessary diagrams. (20)
4. (a) Explain MC and BTE methods of ion implantation. (20)

Or

- (b) Discuss about Bipolar IC Technology with necessary diagrams. (20)
5. (a) Explain Chemical methods used in the VLSI technology. (20)

Or

- (b) Explain VLSI Assembly technology. (20)
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