

DVLSI-Unit Test 1

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Quiz questions

10 questions each for 1 mark each

The _____ is used to reduce the resistivity of poly silicon. *

1 point

- ☒ Doping impurities
- ☐ Photo resist
- ☐ None of the mentioned
- ☐ Etching

The parameter which is not scaled to any factor is: *

1 point

- ☒ Channel resistance
- ☐ Power speed product
- ☐ Switching energy
- ☐ All of the mentioned

The chemical used for shielding the active areas to achieve selective oxide growth is? *

1 point

- ☒ Silicon Nitride
- ☐ Silver Nitride
- ☐ Polysilicon
- ☐ Hydrofluoric acid

To grow the polysilicon gate layer, which of the following chemical is used for chemical vapour deposition? *

1 point

- ☐ Silicon Nitride(Si3N4)
- ☒ Silane gas(SiH4)
- ☐ Silicon oxide
- ☐ None of the mentioned

MOSFET has greatest application in digital circuit due to *

1 point

- ☒ Low power consumption
- ☐ Small amount of space it takes on a chip
- ☐ All of the above
- ☐ Less noise

Physical and electrical specification is given in _____ *

1 point

- ☐ logic design
- ☒ functional design
- ☐ architectural design
- ☐ system design

The width of n-diffusion and p-diffusion layer should be? *

1 point

- ☐ λ
- ☐ 4λ
- ☒ 2λ
- ☐ 3λ

The depletion N-channel MOSFET *

1 point

- ☐ Can be operated as a JFET with zero gate voltage
- ☐ Cannot be operated as an enhancement MOSFET
- ☐ Can be operated as an enhancement MOSFET by applying -ve bias to gate
- ☒ Can be operated as an enhancement MOSFET by applying +ve bias to gate

A FinFET is classified as a type of *

1 point

- ☐ Single-gate Metal Oxide Semiconductor Field Effect Transistor (MOSFET).
- ☐ Both a and b
- ☐ None of above
- ☒ multi-gate Metal Oxide Semiconductor Field Effect Transistor (MOSFET).

VLSI technology uses _____ to form integrated circuit. *

1 point

- ☒ transistors
- ☐ buffers
- ☐ switches
- ☐ diodes

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