

Total No. of Questions : 6]

SEAT No. :

P46

[Total No. of Pages : 1

APR - 17/BE/Insem. - 53
B.E. E & TC (Semester - II)
NANO ELECTRONICS & MEMS
(2012 Pattern)

Time : 1 Hours]

[Maximum Marks : 30

Instructions to the candidates:

- 1) Answer Q. 1 or Q.2, Q.3 or Q.4, Q.5 or Q.6*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Assume suitable data if necessary.*

Q1) a) Explain different types of cubic structures. **[6]**

b) Explain in brief point defects. **[4]**

OR

Q2) Explain different steps involved in fabrication of MOSFET **[10]**

Q3) Explain Chemical vapor Deposition method in detail. **[10]**

OR

Q4) Explain different types of Etching methods in detail. **[10]**

Q5) Explain the concept of **[10]**

- a) Single electron devices & Transistor (SET)
- b) Quantum dot
- c) Quantum wire
- d) Nano wires

OR

Q6) a) Explain quantum particles with applications. **[5]**

b) Draw and explain construction of FinFET. **[5]**

