

06EC6155

Reg. No _____

Name _____

A P J ABDUL KALAM TECHNOLOGICAL UNIVERSITY**M.TECH DEGREE EXAMINATION, DECEMBER 2017****FIRST SEMESTER****Branch: VLSI & Embedded Systems****VLSI Technology****Time: 3 Hours****Max. Marks: 60****PART A***Answer ALL questions*

1. Explain various Wafer Cleaning process used in VLSI
2. Differentiate between positive photo resist and negative photo resist
3. Compare the two types of reactors used in Thermal CVD technique.
4. Mention any two problems that can occur in metallization.

(4 x 5 marks =20 marks)**PART B**

5. Explain solid state diffusion with necessary diagrams.

OR

6. Summarize different types of clean room techniques used in IC fabrication.

7. Differentiate between contact printing and projection printing

OR

8. Explain the kinetics of silicon dioxide growth for thin films and thick film.

9. Briefly describe CVD process steps and techniques involved in the deposition of polysilicon.

OR

10. Explain the steps involved in a CVD process and specify the techniques for the deposition of metal films.

11. Describe the evaporation and sputtering method used for formation of metal films.

OR

12. Discuss in brief the process flow involved in the fabrication of Bipolar devices.

(4 x 10 marks =40 marks)

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