28/9/13

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B.E./B.Tech.(Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC2013

ELECTRONICS AND COMMUNICATION ENGINEERING BRANCH

EIGHTH SEMESTER

EC 514 / EC 9045 – CAD FOR VLSI

(REGULATIONS 2004 / 2008)

Duration: 3 Hours **Max.marks:100**

Answer ALL questions

PART-A (10x2=20 Marks)

1. How do you convert breadth first search into depth first search?
2. What are the most important entities to be optimized?
3. Distinguish between NP-complete and NP-hard problems
4. List the features of Tabu search algorithm.
5. Write any four most important parameters of local routing problems,
6. Define channel routing.
7. What is meant by signal modeling?
8. What is meant by mixed-mode simulator?
9. Define assignment problem.
10. Construct the truth table modeling of the behavior of a two input NAND gate.

PART-B (5X16=80 Marks)

11. Discuss any three general purpose heuristics for combinatorial optimization. Write the pseudo code for anyone. **(16)**

12.(a)With suitable example, discuss the Kernighan-Lin partition algorithm. **(16)**

OR

12.(b)How do you group the placement algorithms? Explain. **(16)**

13.(a)Explain the basic version of Lee's algorithm for area routing. **(16)**

OR

13.(b)Illustrate the floor plan based design methodology using Y-chart. **(16)**

14.(a)Describe the components of the software modules of a simulator. **(16)**

OR

14.(b)Briefly discuss compiler driven and event driven simulations. **(16)**

15.(a)Illustrate the application of OBDD in the synthesis and verification of VLSI circuits. **(16)**

OR

15.(b)Explain the objectives and synthesis aspects of scheduling algorithm. **(16)**