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B.E. / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2012
Electronics and Communication Engineering Branch
EIGHT SEMESTER
EC 514 – CAD for VLSI
(REGULATIONS 2004)

Time: 3 Hours

Max. Marks: 100

Answer All Questions

Part-A

(10 x 2 = 20 Marks)

- 1) Draw the basic VLSI design flow diagram.
- 2) What are different types of tools available for CAD? And draw the Y- chart.
- 3) Differentiate the data types and the data structures.
- 4) List out the applications of compaction.
- 5) How is the placement algorithms grouped?
- 6) Give the major objectives of floorplanning process.
- 7) What is meant by mixed-level and mixed-mode simulators? Write the comparison table.
- 8) List the different types of simulation abstraction level.
- 9) What is meant by scheduling?
- 10) Why the high level synthesis model is necessary for hardware implementation process?

Part-B

(5 x 16 = 80 Marks)

11)

- (a) List the different types of graph algorithms. Explain about Dijkstra's shortest path algorithm. (16)

12)

- (a) Write and explain the pseudo code describe of Prim's minimum spanning tree algorithm. (16)

(or)

- (b) Describe in detail about the Bellman-Ford algorithm. (16)

13)

- (a) Describe in detail about the various channel routing models (16)

(or)

- (b) Explain in detail about the Liao-Wong Compaction algorithm. (16)

14)

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

(or)

(b) Compute the positive co-factor of an ROBDD. List out the various factors. (16)

15.

(a) Explain in detail about the high level transformations in assignment problems. (16)

(or)

(b) Describe the Force directed scheduling algorithm. (16)