CBCS SCHEME

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15EC745

Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020
CAD for VLSI

Time: 3 hrs. Max. Marks: 80

Note: ***Answer any FIVE full questions, choosing full question from each module.***

Module-1

1 a. Briefly explain the different algorithms for NP hard problems. **(08 Marks)**
b. Discuss the three main search techniques used in graph search algorithm. **(08 Marks)**

OR

2 a. Explain line sweep method with the help of an algorithm. **(10 Marks)**
b. Write shortest path algorithm. **(06 Marks)**

Module-2

3 a. Write notes on : i) Linked list ii) Corner stitching. **(08 Marks)**
b. Briefly explain the relationship between different graph classes of physical design. **(08 Marks)**

OR

4 a. List out and explain the various atomic operations supported by layout editor. **(10 Marks)**
b. Explain multilayer operations with the help of a neat diagram. **(06 Marks)**

Module-3

5 a. Briefly explain design style specific partitioning problems. **(06 Marks)**
b. Explain the classification of floorplanning algorithms. **(10 Marks)**

OR

6 a. Explain the classification of partitioning algorithms. **(06 Marks)**
b. What are the various factors to be considered by the chip planning, floorplanning, pin assignment and placement algorithms. **(10 Marks)**

Module-4

7 a. Classify the pin assignment algorithms and explain briefly. **(10 Marks)**
b. Explain the classification of placement algorithms. **(06 Marks)**

OR

8 a. Write a short note on sequence pair technique. **(06 Marks)**
b. Explain the various objective functions and placement procedures in Breuer's algorithm. **(10 Marks)**

Module-5

9 a. Explain design style specific global routing problems. **(06 Marks)**
b. What are the various parameters to be considered in detailed routing problem? Also define detailed routing. **(10 Marks)**

OR

10 a. Write an algorithms for LEE – ROUTER. **(06 Marks)**
b. Briefly explain five distinct phases decomposing MPCB routing problem. **(10 Marks)**

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