Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal School of Information Sciences (MSIS), Manipal
First Semester Master of Engineering - ME (VLSI Design / Microelectronics and VLSI Technology) Degree Examination - November / December 2023

CAD for VLSI (Elective-1) [VLS 5131]

Marks: 100   **Duration: 180 mins.**

Thursday, November 23, 2023

Answer all the questions.

1)	Illustrate and explain the design domains using Gajski's 'Y' chart. [CO1]	(10)
2)	Explain the various stages and tools in Algorithmic and System Design. [CO2]	(10)
3)	Discuss the important verification methods. [CO2]	(10)
4)	a) List the applications of partitioning in high level synthesis. (4) [CO3] b) Describe the cluster growth method of partitioning. (6)	(10)
5)	Explain the force directed scheduling algorithm with an example. [CO3]	(10)
6)	Discuss the allocation tasks in datapath synthesis. [CO3]	(10)
7)	Describe the following. [CO3] a) Slicing floorplan (5) b) Wheel floorplan (5)	(10)
8)	Explain the parameters that affect routing problems. [CO3]	(10)
9)	Illustrate and explain the left edge algorithm for channel routing without vertical constraints with the help of an example. [CO3]	(10)
10)	a) List the applications of layout compaction. (5) [CO3] b) Illustrate the basic types of layout design rules. (5)	(10)

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