

7E 4240

Roll No.

[Total No. of Pages : 2]

7E 4240**B.Tech. VII Semester (Main/Back) Examination - 2014****Computer Engg.****7CS4 Computer Aided Design For VLSI****Time : 3 Hours****Maximum Marks : 80
Min. Passing Marks : 24****Instructions to Candidates:**

Attempt any **five** questions, selecting **one** question from each **unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

Unit - I

1. Explain design stages of a microelectronic circuit in detail (16)

OR

1. Briefly describe complexity in microelectronic circuit design also explain semicustom design style of microelectronic circuit (16)

Unit-II

2. Explain Boolean functions and its derivatives also find out cofactor consensus and smoothing of equation $f = ab+bc+ca$ with respect to 'C' (16)

OR

2. a) Explain Data flow and sequencing graph with the help of an example (8)
b) Explain Bryant's reduction algorithm in detail (8)

Unit-III

3. a) What is synchronization problem? Explain (6)
b) Explain scheduling in pipelined circuit in detail. (10)

OR

3. a) What is the need of scheduling in Architectural synthesis? Explain (7)
b) Explain list scheduling with the required algorithms in detail (9)

Unit-IV

4. Explain Resource sharing and Binding in sequencing graphs for resource dominated circuits in detail. (16)

OR

4. Write short notes on the following :
- a) Functions with multi valued logic (8)
 - b) Positional cube Notations (8)

Unit-V

5. a) Explain simulated Annealing in detail (8)
- b) Describe floor planning with its goals and objectives (8)

OR

5. Write short notes on
- a) Circuit extraction and Design Rule Checking (6)
 - b) Left edge algorithm (5)
 - c) Channel Routing algorithm (5)