

No. of Printed Pages : 03

Roll No.

BB-763

M. Tech. EXAMINATION, Dec. 2018

(Second Semester)

(B. Scheme) (Re-appear Only)

ECE(VLSI)

MTVLSI506

OPTIMIZATION FOR VLSI DESIGN

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

(2-24/14) M-BB-763

P.T.O.

Unit I

1. What is an Operational Research ? Discuss the various stages of development of OR. **15**
2. (a) Explain the concept of duality ? How is it helpful in solving LPP ? Explain with one example. **10**
(b) Why is simplex method considered superior to the graphic method ? **5**

Unit II

3. Define feasible solution, basic solution, non-degenerate solution, optimal solution in a transport problem. **15**
4. (a) Give the mathematical formulation of an assignment problem. **10**
(b) What is Simulation ? Explain various types of simulation and write its advantages. **5**

Unit III

5. (a) Explain single and multiperiod models. **5**

M-BB-763

2

- (b) What do you understand by Queuing models ? Why do the “Arrivals” and “Services” following the poisson and exponential distribution respectively. **10**
6. (a) Briefly explain different queuing model. **10**
(b) Differentiate between Pure birth and Death model. **5**

Unit IV

7. Solve the following LPP using simplex method : **15**

Minimise : $Z = 12x_1 + 20x_2$

Subject to :

$$6x_1 + 8x_2 \geq 100$$

$$7x_1 + 12x_2 \geq 120$$

$$x_1; x_2 \geq 0$$

8. Write short notes on any *two* of the following :
(i) Simulated Annealing Algorithm
(ii) Genetic Algorithm
(iii) TSP. **8+7**

(2-24/15) **M-BB-763**

3

70