

Total No. of Questions : 8]

SEAT No. :

[Total No. of Pages :2

P3287

[5037]-2006

M.Sc.

COMPUTER SCIENCE

**CS - 207 : Advance Design & Analysis of Algorithms
(2013 Pattern) (Semester - II)**

Time : 3 Hours]

[Max. Marks :50

Instructions to the candidates:

- 1) *Answer any 5 questions.*
- 2) *All questions carry equal marks.*
- 3) *Figures to the right indicates full marks.*

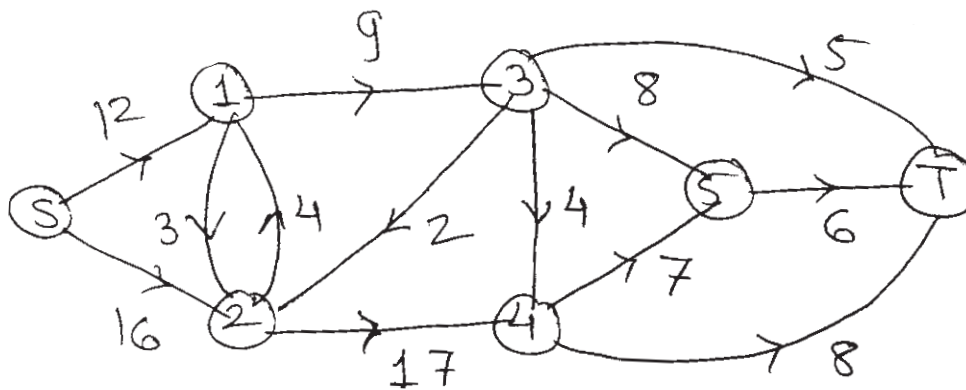
- Q1)** a) What is Primal - dual method? Where is it applied? [4]
b) Write a note on 'Solution to TSP with complete enumeration'. [4]
c) What is cutting plane method? What is it's use. [2]
- Q2)** a) How to use approximation algorithm to solve group steiner tree problem?[4]
b) Discuss discrete optimization. [4]
c) What is the concept of K median problem? [2]
- Q3)** a) Write & explain the algorithm to delete a node from Fibonacciheap. [4]
b) Discuss convex programming with ellipsoid method. [4]
c) Where do we require string searching. [2]
- Q4)** a) What are the types of enumeration method? [4]
b) What are suffix trees? How they are advantageous? [4]
c) What is topological sort? What are its limitations? [2]

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- Q5)** a) Explain the working of Boyer-Moore string searching algorithm. [4]
b) Discuss working of Simplex method. [4]
c) What are splay trees. [2]

- Q6)** a) Explain how linear programming can work to solve different problems. [4]
b) Write KMP algorithm. [4]
c) Where is heuristic optimization used? [2]

- Q7)** a) Find out maximum flow through the following network. [5]



- b) Write a note on memory management using B trees. [5]

- Q8)** a) How can we use universal steiner trees to solve TSP? [5]
b) Explain the working & use of dynamic trees. [5]

