C 30101

(Pages : 2)

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGRE EXAMINATION NOVEMBER 2017

Computer Science Engineering

CS/IT 14 701-DESIGN AND ANALYSIS OF ALGORITHM

Time : Three Hours

Maximum : 100 Marks

EDUC

Nam

Reg.

Part A

Answer any eight.

- 1. Discuss conditional big-oh notation.
- 2. Analyze the order of growth :

(i) F(n) = 2n2 + 5 and g(n) = 7n. Use the $\Omega(g(n))$ notation.

- 3. List out the procedures to solve travelling salesman problem.
- 4. Explain fractional knapsack problem.
- 5. Differentiate dynamic programming and divide and conquer.
- 6. Summarize feasible and optimal solution.
- 7. Describe the Knapsack problem by using Exhaustive search.
- 8. Describe Huffman trees and its applications.
- 9. Explain convex hull problem and the solution involved behind it.
- 10. Discuss Monte Carlo algorithms in brief.

 $(8 \times 5 = 40 \text{ marks})$

Part B

Descriptive/Analytical/Problem solving questions.

11. (A) Discuss Quick Sort algorithm using an example.

Or

- (B) Explain Merge Sort with suitable example.
- 12. (A) Discuss Warshall's Algorithm with suitable diagrams.

Or

(B) Explain Memory Function algorithm for the Knapsack problem.

Turn over

13. (A) Explain NP Hard and NP Complete problems in detail.

¥Kart¥ ≤ 2 odj Litureto o Or

2

(B) Show that the Hamiltonian path problem reduces to the Hamiltonian circuit problem.

14. (A) Elaborate Pseudo random number generation methods.

Or

A PAG

grade materiales

网络帕尔利福利 首任人主义的公司

to think as the area when the real of the state of the st

Is Benefic to Apaginic programming and divide Stationary

and a water and apples of and an income of the second

e carboni Environe contribution and fore world on third reports and gait

minipale learner and details in the offer

sended one sitter services (it if the services)

Solution activity and a start and a second

plantes in space of friends to 8 dated are get for the

when the minute share to be present in the second second second second second second second second second second

ann gaile all fair, a fight a guilt fair a fairfeacht an ann a' s

and and the second second proved to and the

(B) Explain the backtracking algorithm for the n-queens problem.

 $(4 \times 15 = 60 \text{ marks})$

11