Pre. Ph.D. Course Work (2017 Course) : (Computer Science) :
SUMMER - 2019
SUBJECT: PAPER-II RECENT ADVANCES IN COMPUTER SCIENCE

Day: Wednesday
Date: 24/04/2019

Time: 10.00 AM TO 1.00 PM
Max. Marks: 100

S-2019-5321

N.B.:

1) Attempt **ANY FIVE** questions from Section-I.
2) Attempt **ANY FIVE** questions from Section-II.
3) Figures to the right indicate **FULL** marks.

SECTION-I

Q.1 Explain Quick Sort. Write the algorithm and derive its complexity in best, average and worst case. **(10)**

Q.2 Explain the Greedy Approach in detail. **(10)**

Q.3 Analyze the solution of Graph Coloring Problem via Backtracking and find its complexity. **(10)**

Q.4 Explain how to solve the Knapsack using Branch and Bound. **(10)**

Q.5 Explain hybrid and community cloud with example. **(10)**

Q.6 Write short notes on **ANY TWO** of the following: **(10)**

a) Parallel Computing
b) Types of operating system
c) Image Enhancement

SECTION-II

Q.7 Discuss the phases of complier with a diagram. **(10)**

Q.8 What are the types of simulations with respect to output analysis? **(10)**

Q.9 Explain Unsupervised learning Neural Network. **(10)**

Q.10 Define the terms chromosomes, fitness function, crossover and mutation as used in Genetic Algorithm. Explain how Genetic Algorithm work in English or pseudo code. **(10)**

Q.11 Explain all fuzzy operations in detail. **(10)**

Q.12 Discuss the concept of Artificial Neural Network in detail. **(10)**

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