

**M. Tech. –II (Computer Engineering) (CBCS – 2015 Course) :
SUMMER - 2019**

SUBJECT : ADVANCED COMPUTER ALGORITHMS

Day : Thursday
Date : 06/06/2019

Time : 11.00 AM TO 02.00 PM
Max. Marks : 60

S-2019-3402

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SAME** Answer book.
- 4) Use of non-programmable calculator is **ALLOWED**.
- 5) Assume suitable data, if necessary.

SECTION – I

- Q. 1** Write note on: (10)
- a) Stored program model
 - b) Abstraction of RAM

OR

What are asymptotic notations? Explain relation Turing machine and RAM model. (10)

- Q. 2** Explain divide and conquer design technique in detail. (10)

OR

What is need for analyzing algorithms and designing different techniques of algorithm? (10)

- Q. 3** Explain Krushkal's algorithm with example. (10)

OR

Write down Binary Search Tree algorithm and analyze its worst case complexity. (10)

SECTION – II

- Q. 4** Explain how strassen's matrix multiplication algorithm is implemented using divide and conquer method. (10)

OR

Write a detail note on string matching with finite automata. (10)

- Q. 5** List different algorithmic designing techniques. Explain branch and bound in detail. (10)

OR

Solve the Hamiltonian cycle problem using Backtracking. (10)

- Q. 6** Explain Approximation algorithm for NP-Hard problem. (10)

OR

Write down Cook's theorem in detail. (10)

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