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AA—9—2019

FACULTY OF COMPUTER STUDIES

B.Sc. (Fourth Semester) EXAMINATION
OCTOBER/NOVEMBER, 2019
(CBCS Pattern)

COMPUTER SCIENCE

(Computer Algorithm)

(Friday, 15-11-2019)   **Time : 2.00 p.m. to 5.00 p.m.**

Time—Three Hours   *Maximum Marks—*75

N.B. :— (i) *All* questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if required.

(iv) Use of any electronic media and device is not permitted.

1. Attempt any *five* of the following :   15

(a) Explain time complexity.

(b) Explain concept of data and algorithm.

(c) Explain merge sort.

(d) Explain minimum spanning tree.

(e) Explain reliability design.

(f) Explain DFS.

(g) Explain subsets and their sum.

2. Attempt any *two* of the following :   10

(a) Explain space complexity.

(b) Explain quick search.

(c) Explain knapsack problem.

P.T.O.

3. Attempt any *two* of the following : 10

   (*a*)   Explain Strassen's multiplication algorithm.

   (*b*)   Explain general method for binary search.

   (*c*)   Explain optimal storage on tapes.

4. Attempt any *two* of the following : 10

   (*a*)   Explain job sequencing with deadline.

   (*b*)   Explain shortest path.

   (*c*)   Explain optimal binary search tree.

5. Attempt any *two* of the following : 10

   (*a*)   Explain travelling salesperson problem.

   (*b*)   Explain multistage graph.

   (*c*)   Explain dynamic programming general method.

6. Attempt any *two* of the following : 10

   (*a*)   Explain Binary tree traversal.

   (*b*)   Explain Breadth first search.

   (*c*)   Explain Bi-connected components.

7. Attempt any *two* of the following : 10

   (*a*)   Explain graph coloring.

   (*b*)   Explain Hamilton cycle.

   (*c*)   Explain 8-queen problem.