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BR—265—2016

FACULTY OF SCIENCE

M.Sc. (First Year) (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(CBCS Pattern)

COMPUTER SCIENCE

Paper CS-103

(Design Analysis and Algorithm)

(Monday, 21-11-2016)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

1. Attempt any *three* of the following : 15
 - (a) What is data structure ?
 - (b) Explain binary search.
 - (c) Explain minimum spanning tree.
 - (d) Write down multistage graphs.
 - (e) Explain Biconnected components.
2. Solve the following (any *three*) : 15
 - (a) Explain general method of greedy method.
 - (b) Explain optimal merge pattern.
 - (c) Explain Reliability design.
 - (d) What is binary tree traversal ? Explain.
3. Answer the following (any *three*) : 15
 - (a) Explain Knapsack problem of greedy method.
 - (b) Explain BFS.
 - (c) Explain 8-queens problem.
 - (d) Explain optimal binary tree with an example.

P.T.O.

4. Answer the following (any *three*) : 15
- (a) Explain merge sort.
 - (b) Explain job sequencing with deadlines.
 - (c) Explain time and space complexity of a given problem.
 - (d) Explain sum of subsets.
5. Write short notes on (any *three*) : 15
- (a) Data and algorithm
 - (b) Quick sort
 - (c) Shortest path
 - (d) DFS
 - (e) Graph coloring.