

Roll No.

Total Pages : 2

BAM/A-20

561

COMPUTER SCIENCE

(Data Structures and C Programming)

Paper-I

Time : Three Hours]

[Maximum Marks : 40

Note : Attempt *five* questions in all, selecting at least *one* question from each section. All questions carry equal marks.

SECTION-A

1. What is Data structure? Explain various classifications and operations that can be performed on data structures in general. 8
2. What is String? Write and explain the algorithm for pattern matching in strings. 8
3. Describe various ways to store stacks in computer memory. Write and explain insertion and deletion algorithms in stacks using all the representations. 8
4. What are the various types of Linked lists? Explain in detail along-with algorithms for traversal in each type of linked list. 8
5. (a) What is Graph? How can you store graphs in computer memory? Explain. 4
(b) Write down the algorithm to sort the given data using bubble sort. 4

SECTION-B

6. (a) What is meant by Identifier? Describe various rules to name the identifiers in C. 4
(b) Explain various data types in C. 4
 7. Explain various operators in C in detail. 8
 8. Describe various I/O statements in C using suitable examples. 8
 9. (a) Comment on the syntax and purpose of switch statement. 4
(b) Write a program to check whether the input number is prime or not. 4
 10. Comment on the need of functions in C. What are the various types of functions? How can you create and use User-defined functions in C? Explain using suitable examples. 8
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