



24CS-BCAP-MA-02-03001

Seat No. \_\_\_\_\_

BACHELOR OF COMPUTER APPLICATION-CS Examination

BCA - CS SEMESTER-2 APRIL 2026 ( NEP ) APRIL - 2026

CS-08: DATA STRUCTURE USING C LANGUAGE

Faculty Code : 11

Subject Code : 24CS-BCAP-MA-02-03001

Time : 2 Hours]

[Total Marks : 50

- Q.1 (A) Attempt the following. 3
- (1) Time complexity of linear search in the worst case is \_\_\_\_\_.
  - (2) The function used to move file pointer is \_\_\_\_\_.
  - (3) Command line arguments are passed using \_\_\_\_\_ and \_\_\_\_\_.
- Q.1 (B) Attempt any one of the following. 2
- (1) What is an algorithm? List any two characteristics.
  - (2) Explain file handling.
- Q.1 (C) Attempt any one of the following. 5
- (1) Explain time and space complexity with suitable examples.
  - (2) Discuss file handling functions in C with examples.
- Q.2 (A) Attempt the following. 3
- (1) Bubble sort compares \_\_\_\_\_ elements.
  - (2) Quick sort uses a \_\_\_\_\_ technique.
  - (3) Shell sort is an extension of \_\_\_\_\_ sort.
- Q.2 (B) Attempt any one of the following. 2
- (1) Differentiate: linear search vs binary search.
  - (2) What is sorting? Explain it.
- Q.2 (C) Attempt any one of the following. 5
- (1) Describe Merge Sort with example and its complexity
  - (2) Discuss Quick Sort algorithm with an example.
- Q.3 (A) Attempt the following. 3
- (1) Stack insertion operation is called \_\_\_\_\_.
  - (2) Queue deletion operation is called \_\_\_\_\_.
  - (3) Stack follows \_\_\_\_\_ principle.
- Q.3 (B) Attempt any one of the following. 2
- (1) Explain recursion.
  - (2) Define queue and explain.

