(i) Printed Pages : 2 Roll No. ....

(ii) Questions : 9 Sub. Code : $\boxed{0}\boxed{3}\boxed{9}\boxed{2}$

Exam. Code : $\boxed{0}\boxed{0}\boxed{0}\boxed{4}$

B.A./B.Sc. (General) 4th Semester

(2053)

COMPUTER SCIENCE

Paper : CS08-Data Structures

Time Allowed : Three Hours] [Maximum Marks : 30

Note :—Attempt *one* question each from Sections A to D. Question No. 9 (Section E) is compulsory. All questions carry equal marks.

SECTION—A

1. What do you mean by Array ? Write an algorithm for Linear search. 6

2. What is stack ? Write algorithms for POP and PUSH operations. 6

SECTION—B

3. What do you mean by Linked List ? How linked list can be represented in memory ? 6

4. What do you understand by Queue ? Describe the applications of queue. 6

SECTION—C

5. What do you understand by Graph ? Explain the difference between DFS and BFS.   6

6. What do you mean by Binary tree ? Describe the different tree traversal algorithms.   6

SECTION—D

7. Define sorting. Explain the algorithm for Selection sort with complexity.   6

8. What do you mean by searching ? Explain the difference between Linear search and Binary search.   6

SECTION—E

(Compulsory Question)

9. Write short notes on the following :—

   (a) Merge sort.   2

   (b) Doubly Linked list.   2

   (c) Binary search tree.   2