

Sarvodaya college

B/H P.D.M. College, Gondal Road, Rajkot

F.Y. Sem -2

Subject: Data Structure with c language

Time: 2 hours

Marks: 50

Q-1 (A) Answer the following: (3)

- 1) Define algorithm?
- 2) What is space complexity?
- 3) A _____ function is used to be allocate memory.

Q-1(B) (2)

- 1) What is Bio-Oh notation?

Q-1(c) (5)

- 1) Explain text file and binary file also explain use of file handling function.

Q-2(A) Answer the following: (3)

- 1) _____ sorting method is also known as bin sort.
- 2) In _____ sorting techniques it compare each element of the list with element next to it.
- 3) How many types of sorting list out all.

Q-2(b) (2)

- 1) Write an algorithm for bubble sort.

Q-2(C) (5)

- 1) What do you mean by searching ? Explain binary search with example.

Q-3(A) (3)

- 1) FIFO stands for_____.
- 2) In queue elements are inserted from _____end.
- 3) If tos = -1 then, the stack is _____.

Q-3(B) (2)

- 1) Define static stack.

Q-3(c) (5)

- 1) Write an algorithm step for push, pop and display operations of stack.

Q-4(A) Answer the following (3)

- 1) Linked list is known as _____ datatype.
- 2) _____ linked list can be performed traversal in both directions.
- 3) What is singly link list

Q-4(B) (2)

- 1) Define types of linked list

Q-4(c) (5)

- 1) Write an algorithm for following of doubly linked list: create, insert (at any place), delete (at any space), display.

Q-5(A) (3)

- 1) Tree is _____ types of data Structure
- 2) The root node has _____ parent node.
- 3) Define B-tree.

Q-5(B) (2)

- 1) Explain the basic terminologies of binary tree.

Q-5(c) (5)

- 1) Write a program to insert node in BST and perform searching.