

Goa Vidyaprasarak Mandal's
Gopal Govind Poy Raiturcar College of Commerce and Economics
Ponda-Goa
B.C.A (Semester-II) Supplementary Examination, May/June 2017
DATA STRUCTURES

Duration: 2 Hrs

Marks: 50

Instructions: 1. All Questions are compulsory.
2. Figures to the right indicate marks.

- Q.1. Define the following. (5*2=10)
- a. Data Structure.
 - b. Almost Complete Binary tree.
 - c. Circular linked List .
 - d. Degree of a node.
 - e. Stacks.
- Q.2.A. State the primitive operations on a Stack. (2)
- Q.2.B. State and explain Primitive operations on Queues. (3)
- Q.2.C. Write a C program to convert decimal number to binary using stack. (5)
- Q.3.A. Write C representation for maketree(x). (2)
- Q.3.B. Write C implementation for deleteafter(p,x) and insertafter(p,x)
of Linear Linked List. (3)
- Q.3.C. Write C program to concatenate 2 linear linked list. (5)
- Q.4.A. What is a general tree? (2)
- Q.4.B. Discuss the efficiency of Quicksort Sort. (3)
- Q.4.C. Explain Bubblesort. (5)
- Q.5.A. Write C implementation for getnode() and freenode(). (2)
- Q.5.B. Write an algorithm for right rotation on a tree. (3)
- Q.5.C. Explain graphs. (5)

XXXXXXXXXXXXXXXXXXXX