

Total Page - 2

UG/3rd Sem/COMP(H)/Pr/19

2019

3rd Semester Examination

COMPUTER SCIENCE (Honours)

Paper - C 5-P

[Practical]

Data Structures Lab

SET-1

Full Marks : 20

Time : 3 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group-A

Answer *any one* question

15 × 1 = 15

1. Write a program to sort a list of given elements using Bubble sort.
2. Write a program to implement singly linked list. Add functions for insertion and deletion of elements.
3. Write a program to implement stack using linked list. Write functions for push and pop operations.

[Turn Over]

4. Write a program to read polynomials using linked list. Add two polynomials given as input.
5. Write a program using recursion to calculate the factorial of a given number.
6. Write a program to print Fiboknacci series using iteration within a given range given as input.
7. Write a program to calculate the GCD of two given numbers using recursion.
8. Write a program to implement a binary search tree and implement the methods for insertion and deletion of elements.
9. Write a program to reverse the order of elements of a stack using another stack.
10. Write a program to implement upper triangular matrix using a one-dimensional array.

Practical Note book 2

Viva-voce 3

2019

3rd Semester Examination

COMPUTER SCIENCE (Honours)

Paper - C 5-P

[Practical]

Data Structures Lab

SET-2

Full Marks : 20

Time : 3 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group-A

Answer *any one* question

15 × 1 = 15

1. Write a program to sort a list of given elements using Insertion sort.
2. Write a program to implement queue using linked list. Write functions for insert and delete operations.

[Turn Over]

3. Write a program to reverse the order of elements of a stack using another queue.
4. Write a program using recursion to calculate the factorial of a given number.
5. Write a program to search an element using binary search from a given list.
6. Write a program to implement a binary search tree and implement the methods for inorder, preorder and postorder traversal.
7. Write a program using array or linked list to convert a sparse matrix into non-zero form and vice-versa.
8. Write a program to Calculate L.C.M. of two numbers using recursion.
9. Write a program to implement a single linked list, including functions for insertion, deletion and display.
10. Write a program to scan two polynomials using a function and then add two polynomials.