FIRST SEMESTER M.SC.COMPUTERSCIENCE MARCH 2021
FIRST INTERNAL EXAMINATION
CSS1C02-ADVANCED DATA STRUCTURES

Time: 2Hrs. **Maximum mark: 30**

I. Answer All Questions (2x2=4)

1. What is the time Complexity of Merge sort and Quick sort?

2. Explain linear and nonlinear data structure with example.

II. Answer any 4 Questions (4x4=16)

1. Briefly explain about Asymptotic Notations with definitions.
2. Derive time complexity of Merge Sort with recursion tree method.
3. Write Algorithm for Inserting elements in Array (at beginning and end).
4. Write Algorithm for deleting element at a specific position in Array.
5. Explain Insertion sort with Algorithm?
6. Write Algorithm for doing Binary search?

III. Answer any one Questions (1x10=10)

1. Write a program for Inserting elements in Linked list?
2. Write notes on

   i. Data structure and its types?

   ii. Abstract data type with example?

FIRST INTERNALS EXAMINATION

M.SC COMPUTER SCIENCE

*Required

Enter your name and roll no? *

Your answer

Attend any 2 questions each carry 2 weightage max .10 marks. 1.explain about software challenges and approaches?

Your answer

2.explain any 2 SDLC model?

Your answer

3.explain feasibility study?

Your answer

Answer any 1 question .each carry 3 weightage. max 15 marks 4.Explain DFD in detail with an example? 5.Explain ER diagram?

Your answer

Answer any one each carry 5 weightage. max marks 25 5.Explain about different use case models? 6.Explain COCOMO model?

Your answer

Clear form

Submit

II Semester PG – First Internal Examination 2020-21

Design and Analysis of Algorithm

Answer all questions

Each carries 5 mark

Time : 2 hours **Marks:50.**

1. What is brute force approach give an example? How does string matching algorithm work?
2. Write short note on merge sort algorithm. Explain the analysis of merge sort
3. What are the advantages of branch and bound algorithm? What is knapsack problem with example?
4. What is LCS in dynamic programming? How does longest common subsequence work?
5. What is sum of subset problems? How do you find the sum of subsets using backtracking?
6. What are the types of algorithm analysis?
7. Which methods are used to solve recurrences?
8. Write short notes on Master's Theorem
9. How do you solve Strassen matrix multiplication?
10. Solve using kruskal's algorithm