

**ANNAMALAI UNIVERSITY**

**Directorate of Distance Education**

**248- Master of Computer Applications**

**First Semester 2021-2022**

**Internal Assessment – Assignment Topics**

**This booklet contains assignment topics for the first semester. . Students have to write and submit assignment for FOUR papers as per the instructions given below**

- 1. Assignment should be in the own handwritten of the students concerned and not type-written or printed or photocopied.**
- 2. Assignment should be written on A4 paper on one side.**
- 3. All assignments (with enrollment number marked on the top right hand corner on all pages) should be put in an envelope with superscription “M.C.A-Assignments” and send to The Director, Directorate of Distance Education, Annamalai Nagar - 608002 by registered post.**
- 4. No notice will be taken on assignments which are not properly filled in with enrolment number and the title of the papers.**
- 5. Students should send full set of assignments for all papers. Partial assignments will not be considered.**

**Assignment Instructions**

**You are expected to write the answers for all the FIVE questions for each course.**

**Each answer should not exceed 5-pages.**

**Each assignment carries 25 marks (5 questions X 5 marks =25 marks)**

**Date to Remember**

**Last Date for Submission : 15:12:2021**

**Last Date for submission with late fee ‘300/-:31-12-2021**

**Assignment sent after 31-12-2021 will not be considered for valuation**

**1Dr. R.SINGARAVEL**

**Director**

**248E110 OBJECT ORIENTED PROGRAMMING USING C++**

Answer all the questions

1. Differentiate between procedural and object oriented programming.
2. Explain if...else statement with suitable example.
3. Explain in detail polymorphism.

4. Discuss about exception handling functions
5. Describe hierarchical data model with suitable example

### **248E1120 ADVANCED DATA STRUCTURES AND ALGORITHMS**

Answer all the questions

1. Briefly explain insertion sort with an example.
2. Solve any one of the recurrences using recursion tree method.
3. Discuss the steps in Huffman algorithm with an example.
4. Describe binary search tree with its operations.
5. Analyze the worst case height of a B-tree.

### **Internal Assessment – Assignment Topuvs**

### **248E1130 RELATIONAL DATABASE MANAGEMENT SYSTEM**

Answer all the questions

1. Explain in detail about the database architecture.
2. Discuss the different types of keys in relational database with examples.
3. Consider the schema student (r.no, name, course, dob, percentage, class) and solve the following queries
  - (i) Display the name of the students having name starting with letter 'A'
  - (ii) Display the list of students having percentage more than 80
  - (iii) Display the list of students having first class from computer science course
  - (iv) Display the list of students having less than 40 percentage

State the use of projection operator of relational algebra with suitable example.

4. What is a group function? List and explain how to use group function to SQL with appropriate examples.

### **2481140 OPERATING SYSTEMS**

Answer all the questions

1. Discuss the steps in Huffman algorithm with an example.
2. Explain the terms: Protection and Security.
3. Briefly explain the types of system calls.
4. Discuss the different types of storage media used in operating systems.
5. Explain in detail about demand paging.

## **248E1150 SOFT SKILLS**

Write in about 400 words on the following topics

Answer all the questions

1. Barriers to effective communication
2. Business proposals
3. The effects of Negative Attitude
4. Types of Interviews.
5. Minutes.