

Term Paper M.Sc.(IT) Part-I

Note: Attempt Any 4 questions from each subject

MS(A)-111 : Introduction to Information Technology

1. Write a detailed note on Generations of the computers.
2. Write a detailed note on the classification of the computers.
3. List in details different types of input and output devices.
4. List and explain different types of computer languages.
5. What is operating system? List its various functions.
6. What is E-Commerce? Explain different types of E-Commerce.

MS(A)-112 : Computer Programming Using C

1. Why is C called a structured programming language.
2. How to use switch case statement? Explain with source code example .
3. How to define multidimensional arrays? What are their utilities?
4. What is a pointer type in C? What are the common issues happened when mishandled.
5. What are functions? What is call by value vs call by reference with example code.
6. Write on Structures in C language.

MS(A)-113 : Computer Organisation and Architecture

1. Explain different types of flip-flops.
2. What is Quine-McCluskey method of minimization? Explain with help of an example .
3. Explain different types of Addressing modes?
4. What is RTL?
5. List and explain different types of modes of data transfer.
6. Explain what is DMA.

MS(A)-114 : Mathematical Foundation of Computer Science

1. State and prove the De-Morgan's laws of set theory.
2. Explain the following terms:
 - a. Big-O Notation
 - b. Big-Omega Notation
 - c. Big-Theta Notation
3. State and prove the first theorem of Graph Theory (or Handshaking Theorem)
4. Explain the method of solving the recurrence relation with the help of generating function.
5. State and prove the Euler's formula for a connected plural graph.
6. If p, q are two propositions, than draw the truth table for following logical operations:
 - a. $p \wedge q$
 - b. $p \vee q$
 - c. $\sim p$
 - d. $p \rightarrow q$
 - e. $p \leftrightarrow q$

MS(A)-115 : Operating System

1. List and explain different types of operating systems.
2. Write a note on CPU scheduling.
3. What is virtual memory management?
4. Discuss the file management in operating system.
5. List and discuss disk scheduling algorithms.
6. What is deadlock? List and discuss few deadlock prevention methods.

MS(A)-121 : Object Oriented Programming Using C++

1. List few advantages and disadvantages of OOPs.
2. What is storage classes? Explain with the help of an example.
3. What are constructors and destructors. Explain with relevant examples.
4. Explain different types of Inheritance.
5. What is Polymorphism?
6. What is operator overloading? Explain with the help of relevant examples.

MS(A)-122 : DATA & FILE STRUCTURES

1. What are Arrays? List different types of operations that are performed on Arrays.
2. What are Stacks? List and explain different types of operations performed on Stacks.
3. What are doubly linked lists?
4. What are Graphs? List different applications of Graphs.
5. List and discuss few sorting techniques.
6. What is Direct File Organization?

MS(A)-123 : Visual Basic

1. Write the various features of VB.
2. Write the steps of creating menus in VB.
3. What is MDI? Explain with the help of an example.
4. What is Active-X control? Give example.
5. What is visual data manager? What are advantages of using visual data manager.
6. What are ADO data objects? Give examples.

MS(A)-124 : Relational Database Management System and Oracle

1. Explain the architecture of DBMS system. List different types of data independence.
2. What is ER Modelling?
3. Write a detailed note on Normalization.
4. List and discuss the ACID properties.
5. Write a note on database concurrency.
6. Write a note of database recovery.