

Technical Question Paper

Q. Big endian refers to

- a) Least significant byte stored in the smallest address.
- b) most significant byte stored in the smallest address
- c) most significant byte stored in the smallest address
- d) none of the above

Q. Write a function to write a word to a particular sector of Flash Memory.

Q. How does Bootstrapping help to load and start an operating system?

Q. What are the limitations of Flash Memory?

Q. What is the full form of SQL? What are the various functions used in SQL?

Q. What is a Balanced Tree? What are Red-Black Trees?

Q. Explain Insertion Sorting. How does Insertion Sorting differ from Binary Sorting?

Q. Explain any given program for the insertion of node in Single Linked List.

Q. What is Tree Traversal in Binary Tree? What are Pre-order, In-order and post-order in Depth-First traversal?

Q. What is the purpose of Semaphore? What are the two operations of Counting Semaphore? Differentiate between a Semaphore and a Mutex.

Q. What is a deadlock Situation? What are the different situations responsible for a deadlock to occur?

Q. What is the physical address if the virtual address is [0,514] and the page table contains an entry (032).

Q. Give one example of Floating point representation. How are the different operations carried out in floating point representation?

Q. What is a Use Case Diagram? What are their advantages? Explain with the help of a simple use case example.

Q. What do you understand by Collaboration in Java?

Q. What is a Class Diagram in UML (Unified Modeling Language)?

Q. What are the different types of Data warehouse Systems? What are Hybrid design Methodologies in Data warehouse Systems?

Q. What is Application Binary Interface (ABI)? How is it responsible for the direction of flow of Stack?

Q. Give three properties of Object oriented Analysis.

Q. What is a Database Trigger in DBMS? Give an example.

Q. What is a Program Segment Prefix (PSP)?

Technical Paper for C language

Q. Write and explain a C program for Binary Search.

Q. Write a C program for nibble swapping of any hexadecimal data.

Q. What are the bitwise shift operators?

Q. What is the purpose of Binary Tree in C language? What are the different functions used in a Binary Tree?

Q. What does a.out stand for?

Q. Write a program to print a number into its number name.

Q. For the following program, what are the values of i and j at the end of the loop

```
main()
```

```
{j=0
```

```
For(i=0;i<10;i++)
```

```
j+=i;
```

```
}
```

Q. What is a Fork System call in C? In the following program, how many times "Hello" will be printed?

```
main()
```

```
{fork();
```

```
fork();  
fork();  
printf("Hello");  
}
```

Q. What is a malloc function? What are the functions that may be used to allocate the dynamic memory during the execution of a program?

Technical Paper for Networking

Q. Explain the different OSI layers and their functions.

Q. Bridges are the part of which of the layers?

Q. Which layer is responsible for end to end delivery of the data?

Q. What is sliding Window Protocol? What are the layers in which the Sliding Window Protocol is used? What are the different types of a Sliding Window Protocol?

Q. What is a Selective Repeat (ARQ) Protocol? What should be the window size of a sender and a receiver and Why?

Q. What is an Address Resolution Protocol (ARP)? What is the packet structure of an Address Resolution Protocol?

Q. What is a Client Server Architecture?