DeltaX Technical MCQs

50 Questions - 45 minutes

The HTTP request message is sent in _____ part of three-way handshake. 1 point

- (○) First
- ( ) Second
- ( ) Third
- ( ) None of the above mentioned

Clear selection

What is the output of the code given below? 1 point

```c
#include <stdio.h>
   int main()
   {
       int a = 10, b = 5, c = 5;
       int d;
       d = b + c == a;
       printf("%d", d);
   }
```

- ( ) Syntax error
- 1
- 5
- ( ) 10

Clear selection

When a computer is first turned on or restarted, a special type of absolute loader is executed called: 1 point

- ( ) Compile and Go loader
- Windows loader
- Bootstrap loader
- ( ) Relating loader

Clear selection

What is the output of the code below? 1 point

```c
#include<stdio.h>
int main()
{
int a@ = 10;
printf("%d", a@);
return 0;
}
```

- 10
- ( ) 10@
- ( ) @
- ( ) [Error] stray '@' in program

Clear selection

Which of the following is true about linked list implementation of stack? 1 point

In push operation, if new nodes are inserted at the beginning of linked list, then in pop operation, nodes must be removed from end.

In push operation, if new nodes are inserted at the end, then in pop operation, nodes must be removed from the beginning.

- ○ Both of the above
- ○ None of the above

Clear selection

The function ____ obtains block of memory dynamically. 1 point

- ○ calloc
- ○ malloc
- ◉ both calloc and malloc
- ○ free

Clear selection

What is the output for the code given below? Assume that main function returns 0. 1 point

```
#include <stdio.h>
int main() {
      int i;
      for (i = 0; i < -5; i--) {
            printf("*");
      }
}
```

- ○ *
- ◉ *****
- ○ Nothing
- ○ Infinite Asterix

Clear selection

What will be the output of the code given below? 1 point

```
#include<stdio.h>
int x = 10;
int main()
{
      int x = 0;
      printf("%d",x);
      return 0;
}
```

- ○ 10
- ◉ 0
- ○ Compilation Error
- ○ Undefined

Clear selection

The time required to examine the packet's header and determine where to direct the packet is part of 1 point

- Processing delay
- Queuing delay
- Transmission delay
- All of the mentioned

Clear selection

Is it possible to run program without main() function? 1 point

- Yes
- No

Clear selection

Guess output of program 1 point

```
#include<stdio.h>
void main()
{
int var1=10;
  {
  int var1 = 20;
  printf("%d %d",var1,var1);
  }
printf("%d %d",var1,var1);
}
```

- 10 10 10 10
- 20 20 20 20
- 20 20 10 10
- 10 10 20 20

Clear selection

Which of the following has a search efficiency of O(1)? 1 point

- Tree
- Heap
- Hash table
- Linked list

Clear selection

If a relation is in BCNF, it is also in: 1 point

- 1NF
- 2NF
- 3NF
- All of the above

Clear selection

What part of object-oriented technology defines superclass and subclass relationships? 1 point

- Inheritance
- Scalability
- Encapsulation
- Polymorphism

Clear selection

What will be the postfix expression for following infix expression: b * c + d / e 1 point

- b*cde/+
- bcd*e/+
- bc*de/+
- bc*de+/

Clear selection

The average depth of a binary search tree is: 1 point

O(n^0.5)

O(n)

O(log n)

◯ O(n log n)

Clear selection

Guess the output of the following program ? 1 point

```c
#include<stdio.h>
int main()
{
    int a = 100, b = 200, c = 300;
    if(!a >= 500)
        b = 300;
    c = 400;
    printf("%d,%d,%d",a, b, c);
    return 0;
}
```

◯ 100,300,300

100,200,400

100,200,300

100,300,400

Clear selection

What is the output of the code below? 1 point

```
class Main {
   public static void main(String args[]) {
      try {
         throw 10;
      }
      catch(int e) {
         System.out.println("Got the  Exception " + e);
      }
   }
}
```

- ◯ Got the Exception 10
- Program will crash
- Compile error
- Non of the above

Clear selection

How many times loop will get executed ? 1 point

```
#include<stdio.h>
int main()
{
    int i = 0;
    while(i <= 255)
    {
        printf("%d", i);
        i++;
    }
    return 0;
}
```

- ◯ 1 Time
- ◯ 255 Times
- ◯ Infinite Times
- ◯ 256 Times

Clear selection

Which of the following is not the member of class? 1 point

- Static function
- Friend function
- Const function
- Virtual function

Clear selection

Which of the following is a linear data structure? Please select all that apply. 1 point

- Array
- Queue
- Stack
- All of the above

Clear selection

what will be the output for the code given below? 1 point

```
#include <iostream>
using namespace std;
int main ()
{
 int x, y;
 x = 2;
 y = ++x * ++x;
 cout << x << y;
 x = 2;
 y = x++ * ++x;
 cout << x << y;
 return 0;
}
```

- ○ 412412
- 41648
- 49416
- ○ 41649

Clear selection

What will be the output for the code given below? 1 point

```
#include <stdio.h>
int main()
{
    int i = 0;
    switch (i)
    {
        case '0': printf("Hello");
                  break;
        case '1': printf("World");
                  break;
        default: printf("HelloWorld");
    }
    return 0;
}
```

- ○ Hello
- ○ World
- ○ HelloWorld
- ○ Compile-time error

Clear selection

..... means multiple copies of the same data items 1 point

Data reduction

Data integrity

Data consistency

Data redundancy

Clear selection

What is the output of the code given below? 1 point

```c
#include <stdio.h>
void main()
{
    int x = 97;
    int y = sizeof(x++);
    printf("x is %d", x);
}
```

x is 97

x is 98

x is 99

Run time error

Clear selection

Web search engines stores information about many web pages by a _____. 1 point

Web Indexer

Web Crawler

Web Organizer

Web Router

Clear selection

Which of the following statement is correct? 1 point

A constructor is called at the time of declaration of an object

A constructor is called at the time of use of an object.

A constructor is called at the time of declaration of a class.

A constructor is called at the time of use of a class.

Clear selection

A person wants to visit some places. He starts from a vertex and then wants to visit every place connected to this vertex and so on. What algorithm he should use? 1 point

Depth First Search

Breadth First Search

Trim's algorithm

None of the mentioned

Clear selection

Suppose the numbers 7, 5, 1, 8, 3, 6, 0, 9, 4, 2 are inserted in that order into an initially empty binary search tree. The binary search tree uses the usual ordering on natural numbers. What is the in-order traversal sequence of the resultant tree? 1 point

7 5 1 0 3 2 4 6 8 9

0 2 4 3 1 6 5 9 8 7

0 1 2 3 4 5 6 7 8 9

9 8 6 4 2 3 0 1 5 7

Clear selection

The values GET, POST, HEAD etc are specified in _____ of HTTP message

1 point

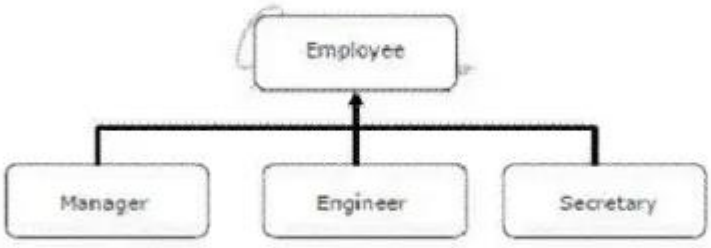
- Request line
- Response line
- Status line
- Entity body

Clear selection

Choose the best design

1 point

It is desired to design an object-oriented employee record system for a company. Each employee has a name, unique id and salary. Employees belong to different categories and their salary is determined by their category. The functions to get Name, getId and compute salary are required. Given the class hierarchy below, possible locations for these functions are:
i).getId is implemented in the superclass
ii).getId is implemented in the subclass
iii).getName is an abstract function in the superclass
iv).getName is implemented in the superclass
v).getName is implemented in the subclass
vi).getSalary is an abstract function in the superclass
vii).getSalary is implemented in the superclass
viii).getSalary is implemented in the subclass



- i, iv, vi, viii
- i, iv, vii
- i, iii, v, vi, viii
- ii, v, viii

Clear selection

Which of the following is false about a binary search tree? 1 point

- ○ The left child is always lesser than its parent
- ◉ The right child is always greater than its parent
- ○ The left and right sub-trees should also be binary search trees
- ○ None of the mentioned

Clear selection

Assume that a node of doubly linked list has previous pointer as prev and next pointer as next.Assume that reference of head of following doubly linked list is passed to below function 1 <--> 2 <--> 3 <--> 4 <--> 5 <-->6. What should be the modified linked list after the function call? 1 point

```
void fun(struct node **head_ref)
{
    struct node *temp = NULL;
    struct node *current = *head_ref;

    while (current !=  NULL)
    {
        temp = current->prev;
        current->prev = current->next;
        current->next = temp;
        current = current->prev;
    }

    if(temp != NULL )
        *head_ref = temp->prev;
}
```

- ○ 2 <--> 1 <--> 4 <--> 3 <--> 6 <-->5

  5 <--> 4 <--> 3 <--> 2 <--> 1 <-->6
- ○ 6 <--> 5 <--> 4 <--> 3 <--> 2 <--> 1
- ○ 6 <--> 5 <--> 4 <--> 3 <--> 1 <--> 2

Simple plain HTML is used to create following type of website _____. 1 point

- ○ Completely Dynamic Website
- ○ Completely Flash Website
- ◉ Completely Static Website
- ○ None of these

Clear selection

A doubly linked list is declared as given below. Where Fwd and Bwd represent forward and backward link to the adjacent elements of the list. Which of the following segments of code deletes the node pointed to by X from the doubly linked list, if it is assumed that X points to neither the first nor the last node of the list? 1 point

```
struct Node {
       int Value;
       struct Node *Fwd;
       struct Node *Bwd;
);
```

- ○ X->Bwd->Fwd = X->Fwd; X->Fwd->Bwd = X->Bwd ;
- ◉ X->Bwd.Fwd = X->Fwd ; X.Fwd->Bwd = X->Bwd ;
- ○ X.Bwd->Fwd = X.Bwd ; X->Fwd.Bwd = X.Bwd ;
- ○ X->Bwd->Fwd = X->Bwd ; X->Fwd->Bwd = X->Fwd;

Clear selection

The following function reverse() is supposed to reverse a singly linked list. There is one line missing at the end of the function. 1 point

```
/* Link list node */
struct node
{
    int data;
    struct node* next;
};

/* head_ref is a double pointer which points to head (or start) pointer
  of linked list */
static void reverse(struct node** head_ref)
{
    struct node* prev   = NULL;
    struct node* current = *head_ref;
    struct node* next;
    while (current != NULL)
    {
        next  = current->next;
        current->next = prev;
        prev = current;
        current = next;
    }
    /*ADD A STATEMENT HERE*/
}
```

- ○ *head_ref = prev;
- ◉ *head_ref = current;
- ○ *head_ref = next;
- ○ *head_ref = NULL;

Which of the following occupies more memory in c? 1 point

long

int

- ○ double
- ○ char

Clear selection

The time required to search an element in a linked list of length n is 1 point

- ○ O (log n)

O (n)

- ○ O (1)
- ○ O(n^2)

Clear selection

With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" starts with an "a"? 1 point

SELECT * FROM Persons WHERE FirstName LIKE 'a%'

SELECT * FROM Persons WHERE FirstName='%a%'

SELECT * FROM Persons WHERE FirstName='a'

- ○ SELECT * FROM Persons WHERE FirstName LIKE '%a'

Clear selection

What is the time complexity for finding the height of the binary tree? 1 point

- ○ h = O(loglogn)
- ○ h = O(nlogn)
- ○ h = O(n)
- ◉ h = O(log n)

Clear selection

What is the output of the code given below? 1 point

```
#include <stdio.h>
int main() {
      char* p = "deltax";
      char c;
      for (int i = 0; i < 3; i++) {
            c = *p++;
      }
      printf("%c", c);
}
```

- ○ d
- ◉ l
- ○ t
- ○ a

Clear selection

Consider a singly linked list of the form where F is a pointer to the first element in the linked list and L is the pointer to the last element in the list. The time of which of the following operations depends on the length of the list? 1 point

- (●) Delete the first element of the list
- ( ) Delete the last element of the list
- ( ) Add an element after the last element of the list
- ( ) Interchange the first two elements of the list

Clear selection

What is the time complexity of the following function?

```
function findElement(array, target) {

  for (var i = 0; i < array.length; i++) {

    if (array[i] === target) {
      return array[i];
    }

  }

  return null;

}
```

- ( ) O(n^2)
- ( ) O(n*log(n))
- ( ) O(log(n))
- (●) O(1)
- ( ) O(n)

Observe the following query and choose the correct option 1 point

SELECT DISTINCT name FROM student WHERE ID IS NOT NULL;

- The query is syntactically wrong
- The query gives all the possible student names where a finite value exists for ID
- The query gives the names of the students that have a null ID and it also excludes identical names
- The query gives the student names where a finite value exists for ID and it excludes identical names

which of the following ways are correct to comment out preprocessing of any line? 1 point

- – #include<stdio.h>

  // #include<stdio.h>
- "#include<stdio.h>
- ##include<stdio.h>

Clear selection

Defective sectors on disks are often known as _____ 1 point

- good blocks
- destroyed blocks
- bad blocks
- none of the mentioned

Clear selection

A thread is also called : 1 point

Light Weight Process(LWP)

Heavy Weight Process(HWP)

Process

None of the mentioned

Clear selection

What happens when you execute the below code?

```
Void main()
{
 int i;
 for(i=0; i<5; ++i++)
 {
   printf("Hello");
 }
}
```

Hello is printed 5 times

Compilation Error

Hello is printed 2 times

Hello is printed 3 times

Clear selection

What is the output of the code given below? 1 point

```c
#include <stdio.h>
int main() {
	switch (20%13/2) {
		case 0:
			printf("Case 0");
		case 1:
			printf("Case 1");
		case 2:
			printf("Case 2");
		default:
			printf("Default case");
	}
	return 0;
}
```

- ○ Case 0
- ○ Case 1
- ○ Case 2
- ◉ Default case

Clear selection

Consider a set of 5 processes whose arrival time, CPU time needed and priority(smaller the number, higher the priority) are given below. If the CPU scheduling is FCFS, the average waiting time will be:

1 point

Process	Arrival time (in ms)	CPU time needed (in ms)	Priority
P1	0	10	5
P2	0	5	3
P3	2	3	1
P4	5	20	4
P5	10	2	2

- ○ 12.8 ms
- ◉ 8 ms
- ○ 6 ms
- ○ None of the above

Clear selection