

MIDTERM EXAMINATION
Spring 2010
CS201- Introduction to Programming (Session - 2)

Question No: 1 (Marks: 1) - Please choose one

In order to get 256 from the number 2568 we divide this number by 10 and take,

- ▶ Its remainder
- ▶ The number
- ▶ **Its quotient**
- ▶ Its divisor

Question No: 2 (Marks: 1) - Please choose one

The correct syntax of do-while loop is,

- ▶ (condition) while; do { statements; };
- ▶ { statements; } do-while ();
- ▶ **while(condition); do { statements; };**
- ▶ do { statements; } while (condition);

Question No: 3 (Marks: 1) - Please choose one

Which of the following function(s) is/are included in **stdlib.h** header file?

- ▶ double atof(const char *nptr)
- ▶ int atoi(const char *nptr)
- ▶ char *strcpy (char *s1, const char *s2)
- ▶ **1 and 2 only**

Question No: 4 (Marks: 1) - Please choose one

If the break statement is missed in switch statement then,

- ▶ The compiler will give error
- ▶ This may cause a logical error
- ▶ **No effect on program**
- ▶ Program stops its execution

Question No: 5 (Marks: 1) - Please choose one

The data type before a function name represents its,

- ▶ **Return Type**
- ▶ Function data
- ▶ Function arguments
- ▶ Function name

Question No: 6 (Marks: 1) - Please choose one

Member function tellg() returns the current location of the _____ pointer.

- ▶ tellptr()

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- ▶ write()
- ▶ seekg()
- ▶ get()

Question No: 7 (Marks: 1) - Please choose one

What does $5 | 6$, evaluate to in decimal where '|' is bitwise OR operator?

- 3 ▶
- 4 ▶
- 5 ▶
- 7 ▶

Question No: 8 (Marks: 1) - Please choose one

C is widely known as development language of _____ operating system.

- ▶ Linux
- ▶ Windows
- ▶ Unix
- ▶ Mac OS

Question No: 9 (Marks: 1) - Please choose one

What will be the result of arithmetic expression $6 + 27/3 * 3$?

- ▶ 33
- ▶ 45
- ▶ 9
- ▶ 30

Question No: 10 (Marks: 1) - Please choose one

How many bytes are occupied by declaring following array of characters?

char str[] = "programming";

- ▶ 10
- ▶ 11
- ▶ 12
- ▶ 13

Question No: 11 (Marks: 1) - Please choose one

What will be the correct syntax for initialization of pointer *ptr* with string "programming"?

- ▶ char ptr = 'programming' ;

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▶ `char *ptr = "programming" ;`

▶ `char *ptr = 'programming' ;`

▶ `*ptr = "programming" ;`

Question No: 12 (Marks: 1) - Please choose one

What will be the result of expression `x%= 2`, if `x = 7`?

`x = 1` ▶

`x = 3` ▶

`x = 7` ▶

`x = 2` ▶

Question No: 13 (Marks: 1) - Please choose one

UNIX has been developed in _____ language.

JAVA ▶

B ▶

`C` ▶

FORTRAN ▶

Question No: 14 (Marks: 1) - Please choose one

Declaring structures does not mean that memory is allocated.

True ▶

False ▶

Question No: 15 (Marks: 1) - Please choose one

What will be the value of `i` and `j` in the following code segment?

`int i, j ;`

`int x[5] = {2, 3, 4, 8, 9} ;`

`int *ptr = &x[2];`

`i = (*ptr)++ ;`

`j = *ptr++ ;`

`i = 5, j = 5` ▶

`i = 5, j = 8` ▶

`i = 4, j = 8` ▶

`i = 5, j = 9` ▶

Question No: 16 (Marks: 1) - Please choose one

When an array element is passed to a function, it is passed by -----.

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reference ►
data type ►
value ►
data ►

Question No: 17 (Marks: 2)

What is the difference between **switch** statement and **if** statement.

Ans: The “switch” statement is used to select among multiple alternatives. It uses many if statements to execute a particular case, while “if” statement is used to select among two alternatives.

Question No: 18 (Marks: 2)

Why do we close a file after use?

Ans: To execute the .exe file properly with latest changes.

Question No: 19 (Marks: 2)

A two-dimensional array has 3 rows and 4 columns. Write down the syntax to initialize the first element of all three rows of two-dimensional array with value 2.

Ans:

```
int matrix[0][0]=2  
int matrix[1][0]=2  
int matrix[2][0]=2
```

Question No: 20 (Marks: 3)

Identify the errors in the following code segment and give the reason of errors.

```
main(){  
int x = 10  
const int *ptr = &x ;  
*ptr = 5 ;  
}
```

Ans:

Int x=10....No ending semicolon.

*ptr=5 .. Declaring a pointer to constant integer. You cannot use this pointer to change the value being pointed to.

Question No: 21 (Marks: 3)

Can you use an assignment operator to assign the value of one C-string to another?

Ans: Yes, we use assignment operator, whenever we use objects that allocate memory it is important that assignment operator should be defined for it, otherwise default operator will copy the value of addresses and pointers.

Question No: 22 (Marks: 5)

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Why binary search algorithm is more efficient than the linear search algorithm?

Ans: Binary search algorithm is more efficient than linear algorithm because the arrays are sorted in ascending or descending order and we use “divide and conquer” technique. In binary search each iteration reduces the search by the factor of two but in the linear we have the same number of searches as we have the number of elements. e.g., if we have an array of 1000 elements the linear search will take 1000 iterations however binary search will take max 10.

Question No: 23 (Marks: 5)

Write down the output of the code given below :

Hint:

Size of char is 1 byte

Size of int is 2 byte

Size of float is 4 byte

```
#include <iostream.h>
```

```
union mytypes_t {  
    char c;  
    int i;  
    float f;  
} mytypes;
```

```
int main(){
```

```
    mytypes.c = 'H';  
    mytypes.i = 15;
```

```
    cout << sizeof(mytypes)<<endl;
```

```
    mytypes.i = 15;  
    mytypes.c = 'H';
```

```
    cout << sizeof(mytypes)<<endl;
```

```
    system("PAUSE");  
    return 0;
```

```
}
```

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