

**Time: 30 Mins**

**CS 101 Quiz 07 Section D**

**Marks: 30**

Name: \_\_\_\_\_

Registration Number: \_\_\_\_\_

1. Write a program to find factorial of a number using the function prototype given in the following code. Number must be taken as input from the user. And result must be displayed to the user. **[10 Points]**

**HINT:** Parameter 1 is the number taken from the user. Parameter 2 is a pointer variable used to calculate/store factorial value.

```
#include<iostream>
using namespace std;

void factorial(int, int *); //Function prototype

int main()
{
    int num, fact;

    cout << "Enter a positive integer: ";
    cin >> num;

    factorial(num, &fact);

    cout << "Factorial of " << num << " = " << fact;

    return 0;
}

void factorial(int num, int *fact)
{
    *fact = 1;

    for(int i=1; i<=num; i++) //calculate factorial using for loop
        *fact = *fact * i;
}
```

Each of the following question are worth **2 points**.

- 1- What is the correct output of the following code?

```
void fun(int a, int b, int &c) {  
    a = b + c;  
    b = a + c;  
    c = a + b;  
}  
int main() {  
    int x = 2, y = 3;  
    fun(x, y, y);  
    cout << x << " " << y;  
    return 0;  
}
```

**2 15**

- 2- What is the correct output of the following code?

```
//function prototype  
int fun(int i=9, int j=9);  
  
int main( ) {  
    cout << fun(5);  
    return 0;  
}  
  
int fun(int x, int y) {  
    return (x + y);  
}
```

**14**

- 3- What is the correct output of the following code?

```
int operate(int a, int b) {  
    return (a * b);  
}  
  
float operate(float a, float b) {  
    return (a / b);  
}  
  
int main( ) {  
    int x = 2, y = 2;  
    float n = 6.0, m = 2.0;  
    cout << operate (x, y);  
    cout << operate (n, m);  
    return 0;  
}
```

**43**

- 4- What is the correct output of the following code?

```
int array[5] = {0, 1, 2, 3};  
cout << array[4];
```

**0**

- 5- What is the correct output of the following code?

```
int array[] = {30, 31, 32, 33};  
cout << array[array[2]-30];
```

**32**

- 6- What is the correct output of the following code? Or mention if syntax error.

```
int array[3] = {0, 1, 2, 3};  
cout << array[0];
```

**Compile error**

- 7- What is the correct output of the following code?

```
long FunFunction(int x, int y = 5, float z = 5) {  
    return(++x + ++y * ++z);  
}
```

```
int main() {  
    int x = 10;  
    int* y = &x;  
    *y = 20;  
    cout << x << " " << *y;  
  
    return 0;  
}
```

**20 20**

- 8- What is the correct output of the following code?

```
int A[2][2] = {2,3,4,5};  
int B[2][2] = {3,3,2,2};  
int C[2][2] = {0};  
  
for(int i=0; i < 2 ; i++)  
  
    for(int j=0; j < 2 ; j++)  
        C[i][j] = A[i][j] * B[i][j];  
  
for(int i=0; i < 2; i++ ){  
    cout << "\n";  
  
    for(int j=0; j < 2; j++ )  
        cout << C[i][j] << " ";  
}
```

**6 9**

**8 10**

9- What is the correct output of the following code?

```
void FunFunction(int &val1, int val2) {  
    val1 *= val1;  
    val2 += val2;  
}  
  
int main(void) {  
    int x = 2, z = 4;  
  
    FunFunction(x, z);  
  
    cout << x << "    " << z;  
    return 0;  
}
```

**4 4**

10- What is the correct output of the following code? Or mention if syntax error.

```
int main() {  
    char string1[20] , string2[20];  
    cin >> string1; //User enters "Good Bye"  
    cin >> string2; //User enters "See you again"  
  
    cout << string1 << " " << string2;  
    return 0;  
}
```

**Good Bye**