University of Sargodha

BS Term System, 1ˢᵗ Term Exam 2013

Subject: Information Technology   **Course: Programming Fundamentals CMP.140**

Time Allowed: 2:30 Hours   Maximum Marks: 60

Note: Section-I is compulsory. Attempt any four questions from section-II.

Section-I   Objective Part $(12*2 = 24)$

Q.1. Write short answers of the following questions in 2-3 lines only.

i. Evaluate the expression $25 * (6 + (50 - 48) / 2) + 15$;   ii. What is type casting?
iii. What is meant by Syntax error? Explain with an example?   iv. What is difference between compiler and interpreter?   v. What are comments? Also mention their types.
vi. int a = 10, b = 20, c = 15, d = 8, e = 40;
What is the value of the expression $a + b / c - 5 /d + 7/ e - 37 \%3$?

vii. Convert the following statements /expressions into proper C expression. $x = \dfrac{x+32}{m-(\frac{32}{2}) \cdot n}$

viii. What are .h files and what should we put in them?
ix. What should be the code "int i = 3; i = i++;" do?
x. What is the right type to use for Boolean values in C?   xi. What does static variable mean?
xii. What will the preprocessor do for a program?

Section- II   Subjective Part $(4*9=36)$

Q.2. Write a C language program to compute the following series
   $G= 1+ x^3 /3! + x^5 /5! + x^7 /7! + \ldots\ldots$ up to n terms.

Q.3. Write the output of the following program in proper format

```c
#include <stdio.h>
void abc(int &, int, int &);
void main()
{
        int a = 12, b = 10, c = 23;
        abc(a, b, c);
        printf("value of a\t and b\t and c\n");
        b = a;
        c = a + b;
        abc(a, b, c);
        printf("now  value of a\t and b\t and c\n %d %d%d",a,b,c);
}
void abc(int & n1, int n2, int & n3)
{
int t = n1;
t = 2 * t;
n1 = t + n2;
n2 = n3;
n3 = n1;
}
```

Q.4. Find syntax errors in the following program and correct them.

```
line 1:         #include<stdio>
line 2:
line 3:         void string1(char );
line 4:·        void MAIN()
line 5:         {
line 6:               char ch[10];
line 7:·                 ch = "PAPER";
line 8:         string1(ch);
line 9:         cout>>ch;
line10:         }
line11:·        int string1(char abc[])
line12:         {
line13:·              int a = strlength(abc);
line14:                 b = float(a);
line 15:
line 16        }
```

Q.5. Write a program that accepts the values of type float in an array of size 10. The array and its size is passed to a function. The function finds the maximum value of the array and returns to main() function. The value is displayed by the main() function.

Q.6. Write a program that accepts two numbers from user and swaps their values. Write a program that inputs a number from the user and displays the factorial of that number using while loop.

Q.7. Write a program that accepts three numbers from user in main function, passes these numbers to another function named add. The function calculates the product of these numbers and returns the result to the main function. The result is displayed by main().