ASSIGNMENT 2 SOLUTION

1. Which of the following cannot be used as a variable in C programming?
   a) Var123
   b) Var_123
   c) 123Var
   d) X_123_Var

Solution: (c) Variable name must not begin with a digit. So, '123Var' is invalid variable declaration in C.

2. Which of the following is not a correct variable type in C?
   a) int
   b) bool
   c) char
   d) All of above are correct variable type

Solution: (d) All of above are correct variable type in C

3. The execution of any C program is

   a) Sequential
   b) Parallel
   c) Multi-threading
   d) None of these

Solution: (a) The execution of the C program is sequential.

4. Which of the following statements is correct?

   I. Keywords are those words whose meaning is already defined by Compiler.
   II. Keywords cannot be used as variable names.
   III. There are 32 keywords in C.
   IV. C keywords are also called as reserved words.

   a) I and II
   b) II and III
   c) I, II and IV
   d) All of the above

Solution: (d) All of the above are correct.

5. A function is

   a) Block of statements to perform some specific task
   b) It is a fundamental modular unit to perform some task
   c) It has a name and can be used multiple times
   d) All of the above

Solution: (d) All are true

ASSIGNMENT 2 SOLUTION

6. What will be the output? [N.B: - .2f is used to print up to 2 decimal places of a floating point number]

```
#include <stdio.h>
int main()
{
  float a = 5.0;
  printf ("The output is  %.2f", (9/5)*a + 7);
  return 0;
}
```

a) 28.2
b) 21.00
c) 16.00
d) 12.00

Solution: (d) 12.00

Since 9 and 5 are integers, integer arithmetic happens in subexpression (9/5) and we get 1 as its value. The calculation will be as follows: (9/5)*a+10 = 1*5.0+7 = 12.00

7. What is the output of the following C code?

```
#include <stdio.h>
int main()
{
        int var = 0110;
        var=var+7;
        printf("%d", var);
        return 0;
}
```

a) 106
b) 70
c) 79
d) Compiler error

Solution: (c) 0110 is an octal representation of 72. Thus 72 +7 = 79 will be stored in var.

8. If integer needs two bytes of storage, then the minimum value of a signed integer in C would be

a) $-(2^{16}-1)$
b) 0

c) $-(2^{15}-1)$
d) -2^{15}

Solution: (d) The first bit is used to indicate whether it is signed or unsigned integer.

ASSIGNMENT 2 SOLUTION

9. What will be the output of the program given below?

```
#include <stdio.h>
int main()
{
    a=9;
   printf("%d", a);
   return 0;
}
```

a) 9
b) 0
c) 1001
d) Compilation Error

Solution: (d) Compilation Error

variable ‘a’ is not declared therefore a compilation error.

10. What is the output?

```
#include<stdio.h>
#define fun(x) (x*x-x)
int main()
{
  float i;
  i = 37.0/fun(2);
  printf("%.2f", i);
  return 0;
}
```

Solution: 18.50
The pre-processing replaces fun(2) with (2*2-2). Thus fun(2)=2, so, i=37.0/2=18.50