

Week 2: Assignment Solution Jan 2023

1. 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 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.

2. 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

3. If an integer needs two bytes of storage, then the minimum value of an unsigned integer in C would be

- a) $-(2^{16} - 1)$
- b) 0
- c) $-(2^{15} - 1)$
- d) -2^{15}

Solution: (b) For an unsigned int, the minimum value to store is 0.

4. What is the output? (short answer type)

```
#include<stdio.h>
#define fun(x) (x*x-2*x+9)
int main()
{
    float i;
    i = 45/fun(2);
    printf("%.2f", i);
    return 0;
}
```

Solution: 5.00

The pre-processing replaces fun(2) with $(2*2-2*2+9)$. Thus fun(2)=9, so, $i=45/9=5.00$ (Not 5 but 5.00, as 'i' has been declared as a float)

5. What is the output? (short answer type)

```
#include <stdio.h>
int main()
{
    float q = 'x';
    printf("%.2f", q);
    return 0;
}
```

Solution: 120.00.

Here the 'x' is a character. Therefore when 'x' is stored inside q as a float then the ascii value of 'x' is stored, which is 120.00 (upto two decimal as the printf uses %.2f).

6. Which of the following is a correct C Keyword?

- a) break
- b) go to
- c) shorter
- d) default

Solution: (d) default is a correct C keyword.

7. Integers can be of the following type in C?

- a) short
- b) int
- c) long
- d) All the above

Solution: (d) all are correct type of int in C.

8. The operator % in C Language is called?

- a) Percentage Operator
- b) Quotient Operator
- c) Modulus
- d) Division

Solution: (c) % is called Modulus operator in C.

9. What will be the correct value of 'x'?

```
int x = 5.6634 + 4.867;
```

- a) x=10
- b) x= 11
- c) x = 10.530400
- d) compilation error.

Solution: (a) 10

Here, $x = 5.6634 + 4.867 = 10.530400$. But as 'x' is declared as int, therefore the value will be truncated and 10 is stored.

10. What is a C Storage Class.?

- a) C Storage decides where to or which memory store the variable.
- b) C Storage Class decides what is the default value of a variable.
- c) C Storage Class decides what is the Scope and Life of a variable.
- d) All the above.

Solution: (d) All of the above.

Storage Classes are used to describe the features of a variable/function. These features basically include the scope, visibility and life-time which help us to trace the existence of a particular variable during the runtime of a program.