

Unit 1 Practice Questions

1. WAP in C to display the roots of a quadratic equation by taking the necessary inputs from the user.
2. Convert the algebraic expression into an equivalent C expression

$$\frac{a \times b - c \times d}{(m + n)(a + b)}$$

$$3x^2 + 2x + 5$$

$$\frac{a + b + c}{d + e}$$

$$\left[\frac{2BY}{d+1} - \frac{x}{3(z+y)} \right]$$

3. List the four control instructions present in C.
4. Evaluate the following expressions and show their hierarchy

- (a) $g = \text{big} / 2 + \text{big} * 4 / \text{big} - \text{big} + \text{abc} / 3 ;$
($\text{abc} = 2.5$, $\text{big} = 2$, assume g to be a float)
- (b) $\text{on} = \text{ink} * \text{act} / 2 + 3 / 2 * \text{act} + 2 + \text{tig} ;$
($\text{ink} = 4$, $\text{act} = 1$, $\text{tig} = 3.2$, assume on to be an int)
- (c) $s = \text{qui} * \text{add} / 4 - 6 / 2 + 2 / 3 * 6 / \text{god} ;$
($\text{qui} = 4$, $\text{add} = 2$, $\text{god} = 2$, assume s to be an int)
- (d) $s = 1 / 3 * a / 4 - 6 / 2 + 2 / 3 * 6 / g ;$
($a = 4$, $g = 3$, assume s to be an int)

5. Which of the following statements are false
 - (1) Each new C instruction has to be written on a separate line
 - (2) Usually all C statements are entered in small case letters
 - (3) Blank spaces may be inserted between two words in a C statement
 - (4) Blank spaces cannot be inserted within a variable name
6. The expression `int a= 30*1000+2768;` evaluates to
 - (1) 32768
 - (2) -32768
 - (3) 113040
 - (4) 0
7. Write a program in C to perform the following task:

If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

8. If a five-digit number is input through the keyboard, write a program to calculate the sum of its digits.
9. What is the output of the following program?

```
int i = 2, j = 3, k, l ;  
float a, b ;  
k = i / j * j ;  
l = j / i * i ;  
a = i / j * j ;  
b = j / i * i ;  
printf( "%d %d %f %f", k, l, a, b ) ;
```

10. The expression, $a = 7 / 22 * (3.14 + 2) * 3 / 5$; evaluates to