**MCQ Questions - 1 Mark**

1. Which of the following is NOT possible with any 2 operators in C?

a) Different precedence, same associativity

b) Different precedence, different associativity

**c) Same precedence, different associativity**

d) All of the mentioned

2. What is an example of iteration in C?

a) for

b) while

c) do-while

**d) all of the mentioned**

3. What will be the output of the following C code?

#include <stdio.h>

int main()

{

int x = 2, y = 0;

int z = (y++) ? y == 1 && x : 0;

printf("%d\n", z);

return 0;

}

**a) 0**

b) 1

c) Undefined behavior

d) Compile time error

4. What will be the output of the following C code?

#include <stdio.h>

int main()

{

int x = 1;

short int i = 2;

float f = 3;

if (sizeof((x == 2) ? f : i) == sizeof(float))

printf("float\n");

else if (sizeof((x == 2) ? f : i) == sizeof(short int))

printf("short int\n");

}

**a) float**

b) short int

c) Undefined behavior

d) Compile time error

5. What will be the output of the following C code?

#include <stdio.h>

int main()

{

int a = 2;

int b = 0;

int y = (b == 0) ? a :(a > b) ? (b = 1): a;

printf("%d\n", y);

}

a) Compile time error

b) 1

**c) 2**

d) Undefined behavior

6. signed and unsigned representation is available for.?

A) short, int, long, char

B) float, double, long double

**C) A & B**

D) None of the above

7. Output of an arithmetic expression with integers and real numbers is \_\_\_ by default.?

A) Integer

**B) Real number**

C) Depends on the numbers used in the expression.

D) None of the above

8. Choose a right statement.

int a = 10 + 4.867;

A) a = 10

B) a = 14.867

**C) a = 14**

D) compiler error.

9. What is the output of C Program.?

#include <stdio.h>

int main()

{

int a=10, b=4;

int res = ((a == b) && printf("CProgramming"));

printf("%d",res);

return 0;

}

**a) 0**

b) 1

c) Compile time error

d) Undefined behavior

10. What is the output of C Program.?

#include <stdio.h>

int main()

{

int a=10, b=4;

int res = ((a != b) || printf("CProgramming "));

printf("%d",res);

return 0;

}

a) 0

**b) 1**

c) Compile time error

d) Undefined behavior

**MCQ Questions - 2 Marks**

1. What will be output if you will compile and execute the following c code?

#include<stdio.h>

int main()

{

int a=2,b=3,c=6,d=5;

int ans = a+b/c+d\*2-5;

printf("%d",ans);

return 0;

}

A.5

B.6

**C.7**

D.0

2. What will be output if you will compile and execute the following c code?

#include<stdio.h>

int main(){

int a=4;

if(!(a == 4)){

a = (a&4);

printf("%d",a);

}

else{

a = a>>2;

printf("%d",a);

}

return 0;

}

A.0

B.4

**C.1**

d.2

3. What will be output if you will compile and execute the following c code?

#include <stdio.h>

void main()

{

int i = 0;

goto label1;

if (i == 0)

{

goto label1;

label2: printf("There");

}

else

{

printf("Hi ");

label1: printf("Hello");

}

}

A.Hi

**B.Hello**

C.There Hi Hello

D.Hi Hello

4.What will be output if you will compile and execute the following c code?

#include <stdio.h>

int main()

{

int i = (7,2,3);

--i;

printf("%d", i++ + i);

return 0;

}

A.4

**B.5**

C.1

d.Error

5. What will be output if you will compile and execute the following c code?

#include <stdio.h>

int main()

{

int a=1;

switch(a)

{

case 0: printf("0 "); break;

case 1: printf("3 ");

default: printf("Go ");

}

switch(a)

{

case 0: printf("0 ");break;

case 1: printf("3 ");break;

case 2: printf("5 ");break;

default: printf("Go "); break;

}

return 0;

}

**A.3 Go 3**

B.3 3

C.3 Go 3 Go

d. Go Go

**Coding Questions - 5 Marks**

**1.** **Write a program to check whether the given year is a leap year.**

#include "stdio.h"

int main(){

int a=0;

scanf("%d",&a);

if(a%4!=0)printf("NOT LEAP YEAR");

else printf("LEAP YEAR");

return 0;

}

**Test Cases:**

| **Test case 1** | **Test case 2** | **Test case 3** | **Test case 4** | **Test case 5** |
| --- | --- | --- | --- | --- |
| **Input**  2022  **Output**  NOT LEAP YEAR | **Input**  2020  **Output**  LEAP YEAR | **Input**  2019  **Output**  NOT LEAP YEAR | **Input**  2018  **Output**  NOT LEAP YEAR | **Input**  2016  **Output**  LEAP YEAR |

**2.** **Write a program to display the day of the week using switch case.**

#include "stdio.h"

int main(){

int day=0;

scanf("%d",&day);

switch (day) {

case 1:

printf("Monday");

break;

case 2:

printf("Tuesday");

break;

case 3:

printf("Wednesday");

break;

case 4:

printf("Thursday");

break;

case 5:

printf("Friday");

break;

case 6:

printf("Saturday");

break;

case 7:

printf("Sunday");

break;

default:

printf("Day does not Exist");

}

return 0;

}

**Test Cases:**

| **Test case 1** | **Test case 2** | **Test case 3** | **Test case 4** | **Test case 5** |
| --- | --- | --- | --- | --- |
| **Input**  1  **Output**  Monday | **Input**  9  **Output**  Day does not Exist | **Input**  2  **Output**  Tuesday | **Input**  4  **Output**  Thursday | **Input**  6  **Output**  Saturday |

**Coding Questions - 10 Marks**

1. **An architect is in charge of designing the layout of a commercial building. Triangular trusses will support the rooftop of the building. For better support of the rooftop, the architect must choose trusses with the largest area from the available stock. The trusses are triangular frameworks whose area is given by the formula: Area of a triangle = (base \* height) / 2.**

**Write a code to help the architect to find the area of the largest trusses.**

**#include <stdio.h>**

**void main()**

**{**

**int n1,n2,b1,b2;**

**printf("Enter Base & height - ");**

**scanf("%d %d", &n1, &n2);**

**printf("Enter Base & height - ");**

**scanf("%d %d", &b1, &b2);**

**float t1 = (n1\*n2)/2;**

**float t2 = (b1\*b2)/2;**

**if (t1>t2)**

**{**

**printf("%f",t1);**

**}**

**else**

**{**

**printf("%f",t2);**

**}**

**}**

|  | **Test Case 1** | **Test Case 2** | **Test Case 3** |
| --- | --- | --- | --- |
| **Input** | **2 8**  **10 9** | **3 90**  **12 8** | **24 56**  **23 65** |
| **Output** | **45.000000** | **135.000000** | **747.000000** |