**MCQ Questions - 1 Mark**

1. Which of the following is true for variable names in C?

a) They can contain alphanumeric characters as well as special characters

b) It is not an error to declare a variable to be one of the keywords(like goto, static)

**c) Variable names cannot start with a digit**

d) Variable can be of any length

2. Which is valid C expression?

a) int my\_num = 100,000;

**b) int my\_num = 100000;**

c) int my num = 1000;

d) int $my\_num = 10000;

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

#include <stdio.h>

int main()

{

int x = 97;

switch (x)

{

case 'a':

printf("yes ");

break;

case 97:

printf("no\n");

break;

}

}

a) yes

b) yes no

**c) Duplicate case value error**

d) Character case value error

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

#include <stdio.h>

void main()

{

int x = 5;

if (x < 1)

printf("hello");

if (x == 5)

printf("hi");

else

printf("no");

}

**a) hi**

b) hello

c) no

d) error

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

#include <stdio.h>

void main()

{

int x = 0;

if (x == 0)

printf("hi");

else

printf("how are u");

printf("hello");

}

a) hi

b) how are you

c) hello

**d) hihello**

6. The function scanf is used to \_\_\_

a) To take logical decisions

**b) Input a set of values**

c) Print a set of values

d) Do mathematical manipulations

7. Precedence determines which operator

**a)Is evaluated first**

b)Is most important

c)Is fastest

d)Operates on the largest number

8. C is a which level language.?

A) Low Level

**B) High Level**

C) Low + High

D) None

9. What is the output of C Program.?

#include <stdio.h>

int main()

{

char a = 30, b = 40, c = 10;

char d = (a \* b) / c;

printf ("%d ", d);

return 0;

}

a) 5

**b) 120**

c) 60

d) 0

10. What is the output of C Program.?

#include <stdio.h>

int main()

{

unsigned int x = -1;

int y = ~0;

if (x == y)

printf("same");

else

printf("not same");

return 0;

}

**a) same**

b) not same

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;

printf("%d",ans);

return 0;

}

**A.2**

B.10

C.12

D.0

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

#include<stdio.h>

int main(){

int a=3;

if(a == 5){

a = (a^4);

printf("%d",a);

}

else{

a = (a|2);

printf("%d",a);

}

return 0;

}

A.2

**B.3**

C.1

D.8

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

#include <stdio.h>

int main()

{

printf("%d ", 5);

goto l2;

printf("%d ", 2);

l1:goto l2;

l2:printf("%d ", 4);

printf("%d ", 3);

}

A.5 3 4

B.5 5 4

**C.5 4 3**

D.5 4 4

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

#include <stdio.h>

int main()

{

int a = 4,b=3;

a = ++b + ++a;

printf("%d",a);

return 0;

}

A.10

B.8

**C.9**

D.ERROR

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

#include <stdio.h>

int main()

{

int a=5;

switch(a)

{

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

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

case 5: printf("5 ");

default: printf("Go ");

}

a = 0;

switch(a)

{

case 0: printf("0 ");

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

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

default: printf("Go "); break;

}

return 0;

}

1. **5 Go 0 3**
2. 5 Go 0 Go
3. Go Go
4. 5 0

**Coding Questions - 5 Marks**

**1.** **Write a program to check whether the triangle is Equilateral, Isosceles or Scalene.**

#include "stdio.h"

int main(){

int side1=0;

int side2=0;

int side3=0;

scanf("%d",&side1);

scanf("%d",&side2);

scanf("%d",&side3);

if(side1==side2 && side2==side3 && side1==side3) printf("EQUILATERAL");

else if(side1==side2 || side2==side3 || side1==side3) printf("ISOSCELES");

else printf("SCALENE");

return 0;

}

**Test Cases:**

| **Test case 1** | **Test case 2** | **Test case 3** | **Test case 4** | **Test case 5** |
| --- | --- | --- | --- | --- |
| **Input**  10  10  5  **Output**  ISOSCELES | **Input**  10  10  10  **Output**  EQUILATERAL | **Input**  5  4  3  **Output**  SCALENE | **Input**  10  15  20  **Output**  SCALENE | **Input**  15  15  15  **Output**  EQUILATERAL |

**2.** **Write a program to read coordinates of X and Y, and tell in which Quadrant does the point lies.**

#include "stdio.h"

int main(){

int x=0;

int y=0;

scanf("%d",&x);

scanf("%d",&y);

if(x>=0 && y>=0) printf("QUADRANT 1");

else if(x<=0 && y>=0)printf("QUADRANT 2");

else if(x<=0 && y<=0) printf("QUADRANT 3");

else printf("QUADRANT 4");

return 0;

}

**Test Cases:**

| **Test case 1** | **Test case 2** | **Test case 3** | **Test case 4** | **Test case 5** |
| --- | --- | --- | --- | --- |
| **Input**  1 2  **Output**  QUADRANT 1 | **Input**  -1 -2  **Output**  QUADRANT 3 | **Input**  -1 2  **Output**  QUADRANT 2 | **Input**  1 -2  **Output**  QUADRANT 4 | **Input**  2 1  **Output**  QUADRANT 1 |

**Coding Questions - 10 Marks**

1. **a student has to draw a triangle by considering three random angles. Write a program to tell him/her that a triangle can be formed or not by considering that 3 angles.**

Ans:

#include <stdio.h>

int main()

{

int anglea, angleb, anglec, sum;

printf("Input three angles of triangle : ");

scanf("%d %d %d", &anglea, &angleb, &anglec);

// Calculate the sum of all angles of triangle

sum = anglea + angleb + anglec;

// Check whether sum=180 then its a valid triangle otherwise invalid triangle

if(sum == 180)

{

printf("It is a valid triangle.\n");

}

else

{

printf("It is a invalid triangle.\n");

}

return 0;

}

|  | **Test Case 1** | **Test Case 2** | **Test Case 3** |
| --- | --- | --- | --- |
| **Input** | **45 45 45** | **55 60 65** | **120 10 50** |
| **Output** | **Invalid triangle** | **Valid triangle** | **Valid triangle** |