Quiz-3

Question 1

Time: 00:00:09

What will be the output of the pseudocode?

```
#include <stdio.h>

void main()

{

    int a = 100;


    printf("%0 %x", a);


}
```

- a
- %x
- 100
- %0

Ans: %x

Invalid format for the conversion of octal value but the printf function will print the %x as no parameter is passed to it

Question 2

Time: 00:00:03

Observe the code carefully and choose the correct output of this code.

```
#include <stdio.h>

int main()

{

   typedef int score;

   score result = 0.00;

   printf("%d", result);

   return 0;

}
```

- ○ 0.0
- ○ 0.00
- ○ 0.000000
- ○ 0 (Zero)

The type of score variable is defined above the declaration of the variable. Although the float value is assigned to the variable it will print the integer part of the variable

Question 3

Time: 00:00:03

Observe the code carefully and choose the correct output of this code.

```
#include <stdio.h>


int main(){


  float m = 0.0;

  long int n = 10;

  printf("%d", sizeof(m) == sizeof(m+n));

  return 0;

}
```

- 10
- 10.0
- 10+ 0.0
- 0 (Zero)

0 (Zero)

It will return 0 as the size of long int and float will not be equal

Question 4

Time: 00:00:03

What will be the output of following pseudo code?

```
#include <stdio.h>


int main()

{

  int any = ' ' * 10;

  printf("%d", any);

  return 0;

}
```

- 10
- 120
- 320
- 160

320

Ascii value of space (' ') is 32 and 32 * 10 is 320

Question 5

Time: 00:00:02

Observe the code carefully and choose the correct output of this code.

```
#include <stdio.h>

int main()

{

    int tell = 5.0, scl = 1*10;

    do {

        scl /= tell;

    } while(tell--);



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

    return 0;

}
```

- ○ Floating-point exception
- ○ 10
- ○ 5.0
- ○ 10.0

- ◉ Floating-point exception

This will get Floating point exception as the number is once get converted to float and it will catch the exception and stop the code

Question 6

Time: 00:00:03

What will be the output of the following c code?

```
#include <stdio.h>

int main()

{

int b = 80;

char a= (char)b;

int i=sizeof(a);

printf("%d",i);

}
```

- 1
- 80
- 2
- 1

- 1

The given code is good to run, the output of the following code is 1 as the character variable occupies the memory of 1 in the storage.

Question 7

Time: 00:00:03

what will be the output of following c code?

```
#include <stdio.h>

int main()

{

  printf("%f", main);

  return 0;

}
```

- 0 (Zero)
- 0.000
- 0.00000
- 0.000000

- [x] 0.000000

It will print 0.000000 as main is given as argument in float format

Question 8

Time: 00:00:03

What will be the output of the following pseudo-code for input 7 ?

```
1. Read the value of N.
2. Set m=1,T=0
3. If m >N
4.     Go to line No. 9
5. Else
6.     T= T+m
7.     m=m+1
8.     Go to line no.3
9. Display the value of T
10.Stop
```

- ○ 28
- ○ 32
- ○ 56
- ○ 76

- ◉ 28

```
#include<iostream>

using namespace std;

int main()

{

    int N=7;

    int m=1,T=0;

    while(1)

    {

        if(m >N)

            break;

        else

        {

            T= T+m;

            m=m+1;

        }

    }

    cout<<T;

    return 0;

}
```

The above code is c++ representation of the pseudocode where the while loop contains two condition and runs till the value of m is greater than N”

Question 9

Time: 00:00:03

what will be the output of the following algorithm for Num=10?

```
#include <stdio.h>

int main()

{

    float i;

    i = 1;

    printf("%d", i);

    return 0;

}
```

- Garbage value
- 1
- (0)Zero
- Error

Garbage value

It will throw a garbage value because it is initialized as float and the print format is int.

Question 10

Time: 00:00:06

Consider the following pseudocode.

```
#include <stdio.h>

int main()

{

    int a,b;

    a=15;

    b=25;

    for(int i=0;i<5;i++)

    {

        if(i%2==0)

        ++a;

        else

        ++b;

    }

    printf("%d  %d",a,b);

}
```

What is the value of b at the end of the pseudocode?

- ○ 15 25
- ○ 18 27
- ○ 27 18
- ○ 25 15

- ◉ 18 27

when the value of i will be 0,2 and 4, the value of a will be incremented by 1
and when the value of i will be 1 and 3, the value of b will be incremented by 1
hence the final value of a will be 18 and b will be 27

Pseudocode quiz 3

(1) Output of pseudocode

```
#include <stdio.h>
void main(){
    int a=100;
    printf("%100 %ox",a);
```

Analysis: (1) format string "%100 %ox" is invalid

(2) %ox expect argument with hexadecimal

Ans: No correct options

(2) Output of code

```
#include <stdio.h>
int main(){
    typedef int score;
    score result=0.0;
    printf("%d",result);
    return 0;
}
```

Ans: result is of type int assigning 0.00 to int truncates decimal printf("%d",result) prints 0

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(3) Output of code

```
#include<stdio.h>
int main(){
    float n=0.0;
    long int x=10;
    printf("%d", sizeof(n)==sizeof((++)));
    return 0;
}
```

Ans:- (++) is invalid
- Size of (float) is 4 byte
- Size of long (int) is 8 byte
- Comparison 4 == 8 evaluated 0 (false)

(4) Output of pseudocode

```
#include<stdio.h>
int main(){
    int any=' '*10;
    printf("%d", any);
    return 0;
}
```

Ans:- ASCII value of space(' ') is 32
32 * 10 = 320
printf("%d", any) print 320

(5) Output of code

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```
#include<stdio.h>
int main(){
    int tell=5.0, scl=(1*10);
    do{
        scl/=tell;
    }while(tell--);
    printf("%d\n", scl);
    return 0;
}
```

Analysis:-

- tell is initialized to 5
- scl is initialized to 10

- scl /= tell → 10/5 = 2
- tell-- decrements tell to 4
- Next iteration: 2/4 = 0 (integer division)
- 3, 2, 1 result in 0 by division
- tell = 0, division by zero causes floating point exception

(b) Output of code

```
#include<stdio.h>
int main(){
    int b=80;
    char a=(char)b;
    int i=sizeof(a);
    printf("%d", i);
```

Ans: a is char variable assigned value 80
sizeof(a) returns size of char (byte)

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print("%d", i); return 1

(7) Output of code ( )

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

Ans: • main is a function pointer.
• using %d to print function pointer is undefined behaviour.
• print address of garbage value

(8) Pseudocode:-

Read N
Set n=1, T=0
If n>N, goto 9
Else T=T+n, n=n+1
Repeat until n>N
Display T

Ans: loop runs for n=1 to 7 (since n=7)
In each iteration T+=7 → T=7*7
=49

Out: 49

(9) Algorithm (Pseudocode)

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```
#include<stdio.h>
int main(){
    float i=1;
    printf("%d",i);
    return 0;
}
```

Ans:- i is float initialized to 1.0
printf("%d",i) interpret float as int leading to garbage value.

(10) Value of b at End

Ans:- 123--0 is always false, 4 bytes gets in every iteration

Loops runs 5 times: b=25+5=30

a remains 15

correction:- answer suggest a=18,b=27, so, but is 15 30 (DCQ logic doesn't support)