Summary in Graph

Exam Summary (GO Classes Test Series 2024 | Programming | Test 2)

Qs. Attempted:	**14** (5 + 9)	**Correct Marks:**	**18** (4 + 14)
Correct Attempts:	**11** (4 + 7)	**Penalty Marks:**	**0.33** (0.33 + 0)
Incorrect Attempts:	**3** (1 + 2)	**Resultant Marks:**	**17.66** (3.66 + 14)

Total Questions:	**15** (5 + 10)
Total Marks:	**25** (5 + 20)
Exam Duration:	**45 Minutes**
Time Taken:	**21 Minutes**

EXAM RESPONSE | EXAM STATS | FEEDBACK

Technical

Q #1 | Multiple Choice Type | Award: 1 | Penalty: 0.33 | Programming in C

Consider the below program.

```
#include<stdio.h>
void fun (int);
static int i = 3;
main()
{
    fun(3);
    printf("%d", i);
}
```

A. Program will get compiled successfully but linker will produce error
B. Program will not get compiled i.e. it will produce compiler error
C. Program will produce run time error.
D. On running the Program, it will produce output 3.

Your Answer: B | **Correct Answer: A** | Incorrect | Discuss

Q #2 | Multiple Select Type | Award: 1 | Penalty: 0 | Programming in C

What is/are possible choice(s) for "Line 1" to produce output 2123?

```
    void fun(int n)
    {
        printf("%d",n);
        static int i = 0;
 5.     //Line 1
        {
            i++;
            fun(i);
        }
10. }
    int main()
    {
        fun(2);
    }
```

A.
```
    if(i<=2)
```

B.
```
    while(i<=2)
```

C.
```
    if(i>2) return;
```

D.
```
    if(i>2)
```

Your Answer: A;B;C | Correct Answer: A;B;C | Correct | Discuss

Q #3 | Multiple Choice Type | Award: 1 | Penalty: 0.33 | Programming in C

What will be the output of the following program?

```
    #include<stdio.h>
    int sum() {
      static int n =5;
      if (n == 2) return 2;
 5.   return sum(n-1)*n ;
    }
    int main() {
        printf("%d\n", sum() );
        return 0;
10. }
```

A. 54
B. 120
C. 16
D. None of these

Your Answer: D | Correct Answer: D | Correct | Discuss

Q #4 | Multiple Choice Type | Award: 1 | Penalty: 0.33 | Programming in C

Consider the program:

```c
#include<stdio.h>
int main() {
    int k = 0;
    int j = 0;
    while(k == j)
    {
        int k;
        for(k = 0; k < 3; k++)
        j = j+k;
    }
    k++;
    printf("%d", j);
    printf("%d", k);
    return 0;
}
```

Which of the following is true?

A. There is a compilation error.
B. There is no compilation error, and 31 is printed.
C. There is a run time error.
D. There is no compilation error, and 34 is printed.

Your Answer: B **Correct Answer: B** Correct Discuss

Q #5 Multiple Select Type Award: 1 Penalty: 0 Programming in C

Which of the following C -functions will correctly return true if its argument is an odd integer?

I.

```c
bool IsOdd (int x) {
    return (x % 2 == 1);
}
```

II.

```c
bool IsOdd (int x) {
    return (x / 2 == 1);
}
```

III.

```c
bool IsOdd (int x) {
if (x % 2 == 1)
    return true;
else
    return false;
}
```

IV.

```c
bool IsOdd (int x) {
    if (x / 2 == 1)
        return true;
    else
        return false;
}
```

A. I
B. II
C. III
D. IV

Your Answer: A;C **Correct Answer: A;C** Correct Discuss

Q #6 | Multiple Choice Type | Award: 2 | Penalty: 0.67 | Programming in C

As shown below, the file $f.c$ defines a function f whose code refers to the variable x that is not a local variable or a parameter. The file $g.c$ defines a function g whose code refers to the variable x that is not a local variable or a parameter.

```
// file f.c
// declaration for x

void f(int a){
    ...
    x = ...
}
```

```
// file g.c
// declaration for x

void g(char* p){
    ...
    x = ...
}
```

The following table below shows how the variable x is defined in each file. For each row in the table, indicate in Column (c) whether the two functions at run-time refer to the SAME identifier (memory location) or to DIFFERENT identifiers (memory locations)

Column A declaration in f.c	Column B declaration in g.c	Column C SAME or DIFFERENT
int x;	extern int x;	SAME
int x = 0;	static int x;	
static int x;	static int x;	
static int x;	extern int x = 0;	

The first row of column C has been filled for hints. What will be in the 2nd, 3rd, and 4th row of Column C, respectively?

A. SAME, DIFFERENT, DIFFERENT
B. SAME, SAME, SAME
C. DIFFERENT, DIFFERENT, DIFFERENT
D. DIFFERENT, SAME, DIFFERENT

Your Answer: C | Correct Answer: C | Correct | Discuss

Q #7 | Multiple Choice Type | Award: 2 | Penalty: 0.67 | Programming in C

What will be the output of the following program (which is broken down into two files: f1.c and f2.c).

f1.c

```c
#include <stdio.h>
int x;
static int y;
void f()
{
  x = 2;
  y = 3;
}
void g(int a)
{
  int x = 1;
  static int y;

  if (a == 0)
  {
    y = 0;
  }
  else {
    y += x;
  }
  printf("g: %d %d\n", x, y);

}
void p()
{
    printf("p: %d %d\n",x, y);
}
```

f2.c

```c
#include <stdio.h>
extern void g(int);
void p();
extern void f();
extern int x;
static int y;

void s() {
    printf("s: %d %d\n", x, y);
}
main() {
    g(0);
    f();
    g(1);
    p();
    s();
}
```


A.
g: 1 0
g: 1 1
p: 2 3
s: 2 0

B.
g: 2 3
g: 1 1
p: 2 3
s: 0 0

C.
g: 2 0
g: 1 3
p: 2 3
s: 0 3

D.
g: 2 3
g: 1 1
p: 2 3
s: 2 3

Your Answer: A | Correct Answer: A | Correct | Discuss

Q #8 | Multiple Select Type | Award: 2 | Penalty: 0 | Programming in C

Which of the following(s) are true for following function?

```c
int mystery(int a) {
    if(a == 256) return 3;
    return 1 + 2 * mystery(a*4); //line 3
}
```

A. $\text{mystery}(255)$ is an example of infinite recursion
B. if we replace line 3by following line return $1 + \text{mystery(a*4)} + \text{mystery(a*4)}$; then also output is same
C. Only possible outputs are $3, 7, 15, 31$

D. $\mathrm{mystery(i)}$ gives output if and only if i is 1 or multiple of 4

Your Answer: A;B **Correct Answer: A;B** Correct Discuss

Q #9 Numerical Type Award: 2 Penalty: 0 Programming in C

Consider the following variable and function definitions:

```
    int g=10;
    int q3() {
        static int g=5;
        return ++g;
 5. }
    int q4() {
        extern int g;
        return ++g;
    }
10. int q5() {
        int g=1;
        return ++g;
    }
```

What is the value of the expression $q3() + q3() + q4() + q4() + q5() + q5()$?

Your Answer: 40 **Correct Answer: 40** Correct Discuss

Q #10 Multiple Choice Type Award: 2 Penalty: 0.67 Programming in C

What will be the output of the following program -

```
    #include<stdio.h>
    int recur (int *a, int n){
        if (n<=0) return 0;
        else return *a-recur(a+1,n-1);
 5. }
    main (){
        int a[10] = {10,9,8,7,6,5,4,3,2,1};
        int n = recur(a,10);
        printf("%d", n);
10. }
```

A. 5
B. -35
C. -37
D. 35

Your Answer: A **Correct Answer: A** Correct Discuss

Q #11 Numerical Type Award: 2 Penalty: 0 Programming in C

Consider the following pair of mutually recursive functions. What does $g(g(2))$ evaluate to?

```
    int f(int n){
        if (n==0) return 0;
        return f(n-1)+g(n-1);
    }
5.  int g(int n){
        if (n==0) return 1;
        return g(n-1) + f(n);
    }
```

Your Answer: 89 | Correct Answer: 89 | Correct | Discuss

Q #12 | Numerical Type | Award: 2 | Penalty: 0 | Programming in C

What will be the output of the following program?

```
    #include<stdio.h>
    int find(int *a, int n)
    {
        if (n == 1)
5.          return a[0];
        n--;
        return find(a + (a[0] < a[n]), n);
    }
    main() {
10.     int a[10] = {4, 10, 5, 6, 9, 3, 1, 20, 7};
        printf("%d\n", find(a , 10) );
    }
```

Your Answer: | Correct Answer: 20 | Not Attempted | Discuss

Q #13 | Numerical Type | Award: 2 | Penalty: 0 | Programming in C

What will be the output of the following program?

```
    #include<stdio.h>
    int y = 20;
    int fun()
    {
5.      int static x = 22;
        return x -= 2;
    }
    int GOClasses(int n)
    {
10.     if (n % 5)
        {
            y += n+fun();
            return y;
        }
15.     else  return GOClasses (n+3);
    }
    int main()
    {
        int p;
20.     for (int i =0; i <2; i++)
        p = GOClasses(GOClasses(i));
        printf("%d", p);
        return 0;
    }
```

Your Answer: 104256 | Correct Answer: 256 | Incorrect | Discuss

Q #14 | Numerical Type | Award: 2 | Penalty: 0 | Programming in C

In C language, the Order of evaluation of any part of any expression is unspecified.

That means if we have two functions $f()$ and $g()$, in a single expression, then it is unspecified which one will be called first.

```
int x = f(2) + g(3);
// unspecified whether f() or g() is called first
```

Consider below the C program.

How many outcomes are possible if we execute the given program on different compilers?

```
#include<stdio.h>
int a() {
    printf("a");
    return 1;
}
int b() {
    printf("b");
    return 1;
}
int c() {
    printf("c");
    return 1;
}
main() {
    a()+b()+c();
}
```

Your Answer: 2 | Correct Answer: 6 | Incorrect | Discuss

Q #15 | Numerical Type | Award: 2 | Penalty: 0 | Programming in C

Consider the following C-program.

```
#include<stdio.h>
int Count(int x, int y)
{
    if(x < y) return 0;
    else if(x==y) return x + Count(x-1,y);
    else return y + Count(x-2,y-1);
}
int main()
{
    printf("%d" , Count(9,6));
    return 0;
}
```

The output of the program is _____

Your Answer: 18 | Correct Answer: 18 | Correct | Discuss

You're doing Great!

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