ARICENT: First Mile Foundation Program

Quiz 1 Solutions

For questions, refer to the Quiz page. Only the solutions are given below

1. Answer : C
   x++ increments the value to 11. So printf statement uses x=11.

2. Answer : A
   The ASCII value of ‘a’ is 97 which gets switched while switching the char c.

3. Answer : C
   The expression b*c+d-a gets evaluated first, which then sets the value of a to 9. This value is used for incrementing x.

4. Answer : B
   int b = 1.1 assigns 1 to b. Comparing a==b, compares 1 with 1.1 which is FALSE.

5. 11
   The semicolon after the for loop terminates it and the brackets are treated as a single block, thus x++ is executed only once.

6. 13
   Condition is evaluated to true for any non-zero value. So, the first and last IF conditions are evaluated as TRUE.

7. Answer : C
   The do loop executes once and goes to the check. In the check, there is one more increment. So the final answer is 12.

8. Answer : C
   Right shift 4 times of 22 is 22/(2*2*2*2) = 1 (integer division)

9. Answer : A
   “,” can also be used as an operator and it has the least precedence. So in the first statement assignment is done first. In the second, assignment is done later.

10. Answer : C
    printf returns number of characters printed. So the first 10 can be printed using printf in the condition. Since the statement prints more than 0 characters, the IF condition is true and hence the IF part will print one more 10.

11. 9

    = 5 % (5 − 5/2) ∗ (5 −3) + 5

    = 5 % (5 − 2) ∗ (5 − 3) + 5

    = 5 % 3 ∗ 2 + 5

    = 2 ∗ 2 + 5

    = 9

12. Answer : C

    b = c => b = 'A'

    c = b => c = 'A'

    a = c => a = 'A'

    c = a => c = 'A'

Programming Question #1

```
#include<stdio.h>

int main(){
	int x,y,i,a;
	int count=0,flag=0;

	scanf("%d %d",&x,&y);

	for(i=x;i<=y;i++){
		for(a = 0; a <= i; a++)
		{
			if (i == a * a)
			{
				flag=1;
			}
		}
		if(flag==1)
			count++;
		flag=0;
	}
	printf("%d",count);
	return 1;
}
```

Programming Question #2

```
#include<stdio.h>

int main(){
	int x,i,sum=0;

	scanf("%d",&x);

	for(i=1;i<x;i++){
		if(x%i==0){
			sum+=i;
		}
	}
	if(sum==x){
		printf("yes");
	}else{
		printf("no");
	}
	return 1;
}
```

Programming Question #3

```
#include<stdio.h>

int main()
{
   int num;
   int product=1,i,j;

   scanf("%d",&num);
   while(num){
      product *= num%10;
      num = num/10;
   }
   printf("%d",product);
   return 0;
}
```

Programming Question #4

```
#include<stdio.h>

int main()
{
   int x1, y1, x2, y2, x3, y3;

   scanf("%d %d %d %d %d %d",&x1,&y1, &x2, &y2, &x3, &y3);

   if((y2-y1)*(x3-x1) == (y3-y1)*(x2-x1))
      printf("%s","Yes");
   else
      printf("%s","No");
}
```