C Programming

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General Instructions

▶ This question paper has 1 section and a total of 10 questions.

▶ Its is a programming test with 10 questions for 40 minutes.

▶ There are no compilation errors, ignore missing things like, #include, {, }, etc.,

What will be the output of the following program?

```c
#include <stdio.h>
int main()
{
        int a, b, number, result, i;
        a = 6;
        b = 14;
        number = (a >= b) ? a : b;
        for (i = number;; i++)
                if (i % a == 0 && i % b == 0)
                {
                        result = i;
                        break;
                }
        printf("%d", result);
        return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>

int main()
{
    char *x = "Zoho123Corp45";
    int result = 0, i;
    for (i = 0; x[i] != '\0'; i++)
    {
        if (x[i] >= 48 && x[i] <= 57)
            result = result + (x[i] - '0');
    }
    printf("%d", result);
    return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>
int i = 0;

int fun(int a)
{

        i++;
        if (a > 99)
                return a - 12;
        return fun(fun(a + 25));


}


int main()
{
        printf("%d ", fun(69));
        printf("%d", i);
        return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>

int compare(int a, int b, int c)
{
        if (a - b > 0 && a - c > 0)
                return c;
        else if (b - c > 0)
                return a;
        else
                return b;
}

int main()
{
        printf("%d", compare(compare(88, 89, 91), compare(90, 41, 17), compare(75, 100, 96)));
        return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>
int main()
{
        int n, x, count, i;
        n = 68;
        for (x = 1; x <= n; x++)
                if (n % x == 0)
                {
                        for (count = 0, i = 1; i <= x; i++)
                                if (x % i == 0)
                                        count++;
                        if (count == 2)
                                printf("%d ", x);
                }
        return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>

int main()
{
    int n = 4, i, j, sum = 0;
    int a[][4] = { { 12, 15, 16, 20 }, { 4, 10, 2, 21 },
                   { 33, 14, 23, 9 }, { 22, 43, 54, 6 } };
    for (i = 0; i < n; i++) {
        for (j = 0; j < n; j++)
            if (i == j)
                sum = sum + a[i][j];
    }
    printf("%d", sum);
    return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>

int main()
{
    int i = 0, j, k, n = 4;
    while (i++ < n)
    {
        if (i % 2 == 1)
            k = 1;
        else
            k = 0;
        for (j = 1; j <= i; j++, k += 1)
        {
            printf("%d ", k);
        }
    }
    return 0;
}
```

1 0 1 1 2 3 0 1 2 3

```c
#include <stdio.h>
int main()
{
        int sum = 0, maxsum = 0, i, n = 6;
        int a[] = { 2, -2, -1, 3, 4, 2 };
        for (i = 0; i < n; i++)
        {
                if (i == 0 || a[i] < 0 || a[i] < a[i - 1])
                {
                        if (sum > maxsum)
                                maxsum = sum;
                        sum = (a[i] > 0) ? a[i] : 0;
                }
                else
                        sum += a[i];
        }
        if (sum > maxsum)
                maxsum = sum;
        printf("%d", maxsum);
        return 0;
}
```

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What will be the output of the following program?

```c
#include <stdio.h>

int main()
{
        int c[] = { 2, 3, 4, 6, 5 };
        int j, *p = c, *q = c;
        for (j = 0; j < 5; j++)
        {
                printf("%d ", *c);
                ++q;
        }
        for (j = 0; j < 5; j++)
        {
                printf("%d ", *p);
                ++p;
        }
        return 0;
}
```

2 2 2 2 2 2 3 4 6 5

What will be the output of the following program?

```c
#include <stdio.h>

int main()
{
        int n = 12, res = 1;
        while (n > 3)
        {
                n -= 3;
                res *= 3;
        }
        printf("%d", n * res);
        return 0;
}
```

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Thank You

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