

PART A (15 points)

1. What is the outcome of the following programs? [10 points]

a) (1 point)

```
#include <stdio.h>

int main()
{
    printf("This course is\n \\ CSC131");
    return 0;
}
```

Answer:

This course is
 \\ CSC131

b) (1 point)

```
#include <stdio.h>
int main()
{
    double num1, num2;
    num1 = 100;
    num2 = 20;

    num1 += (1 + num2/100);
    printf("Num1 = %.2f", num1);

    return 0;
}
```

Answer:

Num1 = 101.20

c) (4 points)

- 1. What is the outcome if the user gives input 0, 100?**
- 2. What is the outcome if the user gives input 120, 60?**

```
#include <stdio.h>
int main()
{
    int mark1, mark2;
    float final_mark;

    printf("What is your midterm mark? [0..100]");
    scanf("%d", &mark1);

    printf("What is your final mark? [0..100]");
    scanf("%d", &mark2);

    final_mark = (50*mark1 + 50*mark2)/100.0;

    if (final_mark >= 75)
        printf("You got an A");

    else if (final_mark >= 50)
        printf("You got a B");

    else printf("You failed the course");

    return 0;
}
```

Answers:

- You got a B
- You got an A

d) (4 points)

```
#include <stdio.h>
int main()
{
    int i , j;
    for (i=1; i<3 ; i++)
    {
        for (j=1; j<=3; j++)
        {
            if (i%2== 0 || j%2==0)
                printf("***");
            else
            {
                if (j==3)
                    print("---");
            }
        }
        printf("\n");
    }

    return 0;
}
```

Answer:

```
**---
*****
```

2. Given the following C program, find the mistakes [5 points]

```
#include <stdio.h>

int main()
{
    double number;

    printf("Give number");
    scanf("%f",num1); → scanf("%lf",&number)

    sum = sum + number; → double sum; (declare sum variable)

    printf("The sum is ",sum); → printf("The sum is %lf", sum);
}
```

PART B (20 points)

Write the following programs:

1. Write a program that reads an integer and checks whether it is odd or divisible by 4 and prints out the corresponding message **[5 points]**
2. Any conversion program (pound to kilos and grams, feet to meters and centimeters etc..). **[5 points]**
3. Write a program that accepts as input numbers until the user provides the number -1. For the input numbers, you must compute their sum and print it on screen. **[5 points]**
4. Write a program that accepts as input one integer number (e.g n) and prints on the screen the even numbers and odd numbers between 1 to n. **[5 points]**