Student ID:

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)

ORGANISATION OF ISLAMIC COOPERATION (OIC)

Department of Computer Science and Engineering (CSE)

Quiz no. 1 **Winter Semester 2024-2025**

DURATION: 30 MIN **FULL MARKS: 20**

CSE 4107: Structured Programming I

Figures in the right margin indicate marks.

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1. List out and explain the errors in the following code: **7 (CO2) (PO1)**

```
#include<stdio.h>;

void main(void){
    int a;
    float b;
    double c;

    print("Enter the values of a, b and c: ");
    scanf("%d %f %lf", a, b, c);
    printf("a = %d/n b = %f/n c = %lf/n", a, b, c);

    return 0;
};
```

2. Find the output of the following program: **4 (CO1) (PO1)**

```
#include<stdio.h>

void main (){
    int i=0, j=1, k=2;
    k = ++i + --k * -++j - 2;
    printf("%d %d %d", i, j, k--);

    int a=2, b=3, c=3, d=4, e;
    e = d += b *= c = a += -1;
    printf("%d %d %d %d %d", a, b, c, d, e);
}
```

3. Write a C program that takes the following three floating point numbers as inputs from the user: **6 (CO3) (PO1, PO2)**

- The radius of the cylinder
- The height of the cylinder

- Price of paint per unit area

Your program should output the price of painting the whole outer area of the cylinder (including the bottom base and top lid) showing the result upto 4 decimal places. The surface area of a cylinder is calculated using the following formula: $A_1 = 2 \times \pi \times r \times h$, and the area of the top lid and bottom base are both calculated by the same formula: $A_2 = \pi \times r^2$. The total cost should be calculated as: $TotalCost = TotalArea \times CostPerArea$

4. Show the output for the following statement: **3**

```
printf("%-3.2d %5.2f %2.3f", 2, 3.141, 12.02);
```

(CO1)
(PO1)