International Islamic University Chittagong
Department of Electrical and Electronic Engineering

Final Examination Spring-2020 | Program: B.Sc. Engg. (EEE)
Course Code: **CSE-1105** | Course Title: Computer Programming I
Time: **5 hours** (Writing **4 hours 30 minutes** + **30 minutes** submission time) | Full Marks: **50** (**Written** 30 + **Viva**/**Viva-Quiz**-20)

[Answer each of the questions **(1-5)** from the followings; Figures in the right margin indicate full marks.**]**

SET-A-Matric ID- ODD

1(a).	What is the purpose of the do-while statement? How does it differ from the while statement.	**C01**	**R,A**	**02**
1(b).	What is the output of the following program?	**C02**	**R, A**	**02**

```
#include<stdio.h>

main()
{
  char *s = "Hello";

  while(*s!=NULL)
  printf("%c", *s++);
}
```

1(c).	Write a program to find out and print the prime numbers between 1-1000.	**C02**	**U,AN**	**02**
2(a).	What is the consequence of an array? Specify the initialization of an array.	**C02**	**R, A**	**02**
2(b).	Write a program to initialize one dimensional array of size 8 and display the sum and average of array elements	**C02**	**R, AN**	**02**
2(c).	Write a program to create a M*N size 2D array named as A[M][N] and find out how many zero in each row. For Example: input M=3 N=4 1 2 0 0 3 0 5 6 4 2 57 Output of the following input 2 1 0			**02**
3(a).	How can we access a variable by using a pointer, explains with proper example.	**C02**	**RCEU**	**02**
3(b).	. Write a program to swap value of two variables using pointer.	**C02**	**CEU**	**02**
3(c).	What are the advantages & disadvantages of using pointers in C?	**C02**	**U,R**	**02**
		C02	**R,U**	

4(a). What's wrong with this call- **C02** **R** **02**

FILE *fp = fopen("c:\oldfr\sample.dat", 'r');

4(b). What is the output of this program? **C02** **U** **02**

[Program to add two distances (feet-inch)]

```
#include <stdio.h>
struct Distance
{
   int feet;
   float inch;
} dist1, dist2, sum;

int main()
{
   printf("1st distance\n");
   printf("Enter feet: ");
   scanf("%d", &dist1.feet);

   printf("Enter inch: ");
   scanf("%f", &dist1.inch);
   printf("2nd distance\n");

   printf("Enter feet: ");
   scanf("%d", &dist2.feet);

   printf("Enter inch: ");
   scanf("%f", &dist2.inch);


   sum.feet = dist1.feet + dist2.feet;
   sum.inch = dist1.inch + dist2.inch;


   while (sum.inch >= 12)
   {
      ++sum.feet;
      sum.inch = sum.inch - 12;
   }

   printf("Sum of distances = %d\'-%.1f\"", sum.feet, sum.inch);
   return 0;
}
```

4(c). Write down the basic file operation supported by C. Write short note on these function fopen(), fclose(), getc(), putc(). **C01** **R,U** **02**

5(a). Address a function that takes a two-dimensional array as its argument also returns the sum of this array. Describe the function into main. **C02** **R, A** **02**

5(b). What is the output of this program? **C02** **U,AN** **02**

```
#include <stdio.h>
int main()
{
```

```
    int* pc, c;

    c = 22;
    printf("Address of c: %p\n", &c);
    printf("Value of c: %d\n\n", c);  // 22

    pc = &c;
    printf("Address of pointer pc: %p\n", pc);
    printf("Content of pointer pc: %d\n\n", *pc); // 22

    c = 11;
    printf("Address of pointer pc: %p\n", pc);
    printf("Content of pointer pc: %d\n\n", *pc); // 11

    *pc = 2;
    printf("Address of c: %p\n", &c);
    printf("Value of c: %d\n\n", c); // 2
    return 0;
}
```

5(c). Address down the distinction between structure and union shortly. **C01** **CEU** **02**

6. Viva/Viva-Quiz: The time of viva/viva-quiz will be declared in google classroom. **20**