International Islamic University Chittagong

Department of EEE
Final Examination
Course Code: CSE-1105
Full Marks:50

Program: B.Sc.Engg. (EEE)
Semester: Spring-2018
Course Title:ComputerProgramming I
Time: 02 hours 30 minutes

Figures in the right margin indicate full marks. Use separate script for each part.

PART-A

[Answer any <u>two</u> questions from the followings]

1(a). How does a **while** loop differ from a **do-while** loop? Explain. 3

1(b). Write a program to print the following pattern using **for** loop: 3

5 5555
4 444
3 33
2 2
1

1(c). i) Writethe output of this C code? 4

```
void main(){
inti , j;
for (i = 0;i< 3; i++){
for (j = 0;j < 4; j++){
if (i> 1)break;
}
printf("Hi \n");
}
}
```

ii) Writethe output of this C code?

```
void main(){
inti, j;
for (i = 0;i< 3; i++){
for (j = 0;j < 4; j++){
if (i> 1) continue;
printf("%d\n", i);
}
}
}
```

2(a). What is the important of an array? Explain the initialization of an array. 4

2(b). Write a program to sort data of a two dimensional array. 4

2(c). What will be output if you will execute following c code? 2

```
#include<stdio.h>
#define var 3
void main(){
   short num[3][2]={3,6,9,12,15,18};
   printf("%d  %d",*(num+1)[1],**(num+2));
}
```

3(a). Write a **function** which will take three integer numbers as input and return the smallest number. 4

3(b). State the purpose of using**goto** statement in a program? What are forward and backward jumping? 3

3(c). Find errors, if any, in each of the following segment. 3

```
a) if (x + y = z && y > 0);
printf(" ");
b) if (code > 1);
a=b+c
else;
```

a=0
c) if (p<0) | | (q<0);
printf(string is negative).

PART-B

[Answer any <u>three</u> questions from the followings]

4(a). Pointer can create a perfect copy of a variable-explain with example **3**

4(b). Suppose, In a c program you need to read and store *marks* obtained by 40 *students* in 5 different subjects. What type of array will be suitable for this purpose? Show with a code segment. **4**

4(c). What will be the output of the program ? **3**

```
int main()
{
 int x=30, *y, *z;
   y=&x; /* Assume address of x is 500 and integer is 4 byte size */
   z=y;
   *y++=*z++;
   x++;
   printf("x=%d, y=%d, z=%d\n", x, y, z);
   return 0;}
```

5(a). Write a C program to add two distances entered by user. Measurement of distance should be in inch and feet.(Note: 12 inches = 1 foot).using Structure. **4**

5(b). How a Structure is different from a Union. Show with an example. **2**

5(c). Define a structure to define a complex number. Write a C program to implement the addition operation of two complex numbers using function. **4**

6(a). Write output of the following program: **3**

```
#include<stdio.h>
int main(){
intarr[2][4] = {10, 2, 3, 4, 5, 6, 7, 8};
int *p, *q;
  p = &arr[1][1];
q = (int*) arr;
printf("%d, %d\n", *p, *q);
return 0;}
```

6(b). Write down the basic file operation supported by C. Write short note on these function fopen(), fclose(), getc(), putc(). **4**

6(c). Write a function to implement a function named**exchange** which will interchange the values of two variables. **3**

7(a). Write a program to implement sum of two matrixes. **3**

7(b). Which of the statements is correct about the program? **2**

```
int main()
{ int i=10;
   int *j=&i;
   return 0;}
```

7(c). Write a code to perform the sumof the elements of the following array using pointer: intarr[5] = {3, 0,2,9,4, 8}. **3**

7(d). What is recursion?give an example. **2**