

Mid-Term Examination, Odd Semester 2019-20

B.Tech. (CS), Year I, Semester I

BCSC0001: Computer Programming

Time: 2 Hours

Maximum Marks: 30

Section- ANote: Attempt All Three Question.

3 x 2 = 06 Marks

- I. What is the name of system program that combines the separately compiled modules of a program into a form suitable for execution? Distinguish between compiler and interpreter?
- II. Draw a flowchart to calculate the x to the power n using iterative algorithm.
- III. Write a program to find percentage of a student based on his/her marks entered in three subjects.

Section- BNote: Attempt All Three Questions.

3 x 3 = 09 Marks

- I. What will be the output of following programs?

(a)

```
#include <stdio.h>
void main(){
    int a=5;
    switch(a)
    {
        printf("Message\n");
        default: printf("Default\n");
        case 2: printf("Case-2\n");
        case 3: printf("Case-3\n");
    }
}
```

(b)

```
#include <stdio.h>
void main()
{
    int x;
    x = 10 ^ 2+5;
    printf("%d",x);
}
```

(c)

```
#include <stdio.h>
int main()
{
    int m=1200;
    int x=printf("%d",m);
    printf("%d",x);
    return 0;
}
```

- II. Create a program that determines how many years you have left until retirement and the year you can retire. It should prompt for your current age and the age you want to retire and display the output as shown in the example that follows.

Example Output:

What is your current age? 25

At what age would you like to retire? 65

You have 40 years left until you can retire.

So you will retire in 2059.

- III. Write an algorithm and draw flowchart to check whether the entered number is positive, negative or equal to zero.

Section – C

Note: Attempt Any Three Questions.

3 x 5 = 15 Marks

- I. (a) Write a program to calculate the perimeter and area of a rectangle when the length and breadth of the rectangle are inputted through the keyboard.
(b) Write a program to find whether an entered number is even or odd.
- II. Write a program to print sum of first n natural number using while loop.
- III. If an integer needs two bytes of storage, then what would be the minimum value of a signed integer? What will be the output of following programs?

```
(a) #include <stdio.h>
void main(){
float a=8.0,d;
d=(13/5)*a+20;
printf("The output is %0.2f",d);
}
```

```
(b) #include <stdio.h>
void main()
{
int i;
for ( i = 2 ; i++ <= 6 ; printf("%d", i) );
}
```

- IV. What is the difference between while and do while loop? Write a program to print the Fibonacci series upto n terms: 1, 1, 2, 3, 5, 8, 13.....

Printed Pages: 2

University Roll No.....

Mid-Term Examination, Odd Semester 2019-20

Program : B.Tech

Year : I

Semester : I

Subject: Python Programming

Subject Code:BCSG0001

Time : 2 Hours

Maximum Marks: 30

Section- A

Note: Attempt All Three Questions..

3 x 2 =06 Marks

- I. What is the difference between mutable and immutable data structures? List all mutable and immutable data structures.
- II. Write naming conventions for variables in python.
- III. Write a program in python to find the factorial of a number.

Section- B

Note: Attempt All Three Questions.

3 x 3 =09 Marks

- I. Consider the dictionary as
Details={1:"John",16:"Jill",109:"Joe",145:"Jack"}
Write Python code to perform following operations:-
 - a. Print number of customers
 - b. Print Customer names in ascending order
 - c. Delete the record of 145
- II. Write a program in python to find whether a given integer number is "Armstrong" or not.
- III. Write a python program to remove duplicates from a list.