2018 CBCS

1st Semester

COMPUTER SCIENCE

(General)

PAPER-DSC-1AP

(Practical)

Full Marks: 20

Time: 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Python Lab.

Set-1

Answer any one question (Lottery basis).

- 1. Write a program in Python to find the factorials of an integer.
- 2. Write a program in Python to find the first n fibonacis numbers.
- 3. Write a program in Python to calculate the total marks, percentage and grade of a student. Marks obtained in each of the three subjects should be input by the user. Assign grades according to the following criteria:

Grade A: Percentage ≥ 80 Grade B: Percentage ≥ 70 & < 80 Grade C: Percentage ≥ 60 & < 70 Grade D: Percentage ≥ 40 & < 60

Grade E: Percentage < 40. 15

4. Write a program in Python to find the sum of the series:

$$1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{n}$$
.

- 5. Write a program in Python to calculate the product of two compatible matrices. 15
- 6. Write a menu-driven program to create the following 3D objects:

1: Sphere

2: Cylinder

15 3 : Cube.

- 7. Write a program in Python to read n integers and display them as histogram. 15
- 8. Write a program in Python to display the cosine curve. 15

9. Write a program in Python to demonstrate a bar chart.

15

10. Write a program in Python to test if an integer is Armstrong or not. 15

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Python Lab.

Set-2

Answer any one question (Lottery basis).

- 1. Write a program in Python to display the sine curve.
- 2. Write a program in Python to demonstrate a bar chart.
- 3. Write a program in Python to test if an integer is palindrome or not.

- 4. Write a program in Python to read a set of integers and display these as histogram.
- 5. Write a program in Python to find the factorial of an integer.
- 6. Write a program in Python to generate first 20 fibonacci numbers.
- 7. Write a program in Python to display the reverse of an integer. 15
- 8. Write a program in Python to calculate the value of the following series:

$$1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \dots + \frac{1}{n^2}$$
 15

- 9. Write a program in Python to find the highest of n numbers.
- Write a program in Python to test if an integer is armstrong or not.