

**SH-III/Computer Sc./305/SEC-1A(T)/19**

**B.Sc. Semester III (Honours) Examination, 2018-19**

**COMPUTER SCIENCE**

**Course ID : 31515**

**Course Code : SHCSC-305SEC-1A(T)**

**Course Title : Programming in Python**

**Time: 1 Hour 15 Minutes**

**Full Marks: 25**

*The figures in the margin indicate full marks.*

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

1. Answer *any five* questions: 1×5=5
    - (a) What are the different types of errors in programming?
    - (b) Write two advantages of flowchart.
    - (c) Write differences between top-down and bottom-up approach of programming.
    - (d) What is Docstring in Python?
    - (e) What is PUM?
    - (f) Write down two important features of Python.
    - (g) How will you convert an integer to octal in Python?
    - (h) What are different numeric data types available in Python?
  2. Answer *any two* questions: 5×2=10
    - (a) Differentiate between Python and Java.
    - (b) Write a program in Python to check a number is palindrome or not.
    - (c) Draw a flowchart to find GCD of two nos.
    - (d) Explain with example if and elif nested header in Python.
  3. Answer *any one* question: 10×1=10
    - (a) What is numeral literal? Give example. What is list? How lists differ from tuples? Explain the operator precedence of arithmetic operators in Python.
    - (b) What is a dictionary in Python? Give example. Write a Python program to display Fibonacci series and draw a flowchart for the same.
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**B.Sc. Semester III (Honours) Practical Examination, 2018-19**

**COMPUTER SCIENCE**

**Course ID : 31525**

**Course Code : SHCSC-305SEC-1A(P)**

**Course Title : Programming in Python**

**Time: 2 Hours**

**Full Marks: 15**

*The figures in the margin indicate full marks.*

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

(LNB + VIVA = 05, Experiment = 10)

**1. Perform any one experiment:**

**10×1=10**

(a) Write a Program in Python to calculate GCD & LCM of two nos.

(b) Write a Program in Python to evaluate the series

$$X = 1 + \frac{2}{2!} + \frac{3}{3!} + \dots + \frac{n}{n!}$$

(c) Write a program in Python to check whether a no. is Fibonacci term or not.

(d) Write a menu driven program in Python to add, subtract, multiply and divide two complex numbers.

(e) Write a program in Python to display a triangular pattern as follows:

```
      1
     2  3  4
    5  6  7  8  9
   10 11 12 13 14 15
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(f) Write a program in Python to display first 100 prime numbers.

(g) Write a program to find prime factors of a number.

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