

Reg. No. : .....

Name : .....

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.) Examination, November 2020  
 (2014 Admn. Onwards)  
**CORE COURSE IN PHYSICS**  
**5B09PHY : Python Programming**

Max. Marks : 40

Time : 3 Hours

## SECTION – A

Answer **all**. Very short answer type. **Each** carries **1** mark.

1. What is the use of raw\_input function in python ?
2. What is the output of the program code ?  

```
x = 'kannur'
print x + x
```
3. A directory or collection of modules in python is called
4. Write any one method of numerical integration.

(4×1=4)

## SECTION – B

Answer **any seven**. Short answer type. **Each** carries **2** marks.

5. What is linspace function ?
6. Explain any one method to import module.
7. What is exception handling ?
8. Write a note on mutable compound data type in python.
9. Write the syntax of formatted printing. Give one example.
10. Comment on the statement that declaration of variable is necessary in python.
11. Give the hierarchy of mathematical operations in python. Give example.
12. How to invert a matrix in python ?
13. Write the syntax of polar ().
14. Write a program to print the multiplication table of 5.

(7×2=14)



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SECTION – C

Answer **any four**. Short essay/problem type. **Each** carries **3** marks.

15. Write a program to check whether a year is leap year or not.
16. Explain functions in python.
17. Explain the working of for loop in python.
18. What is least square curve fitting ?
19. Write a program to plot sine wave over 0 to  $4\pi$ .
20. What are the differences between arrays and lists in python ?

**(4×3=12)**

SECTION – D

Answer **any two**. Essay type. **Each** carries **5** marks.

21. What are the different compound data types in python ? Explain.
22. Write the different mathematical operations possible in arrays. Give examples.
23. Explain Simpson's rule. Calculate integral of  $x^2$  within the limit 0 to 2. Take no. of divisions as 8.
24. Explain matplotlib module. Plot a circle and exponential functions.

**(2×5=10)**

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