D2BHM2305 (PAGES 2) Reg.No.....

Name: .....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2024

(Regular/Improvement/Supplementary)

HONOURS IN MATHEMATICS

GMAH2B09T: INTRODUCTION TO PYTHON PROGRAMMING

Time: 3 Hours **Maximum Marks: 80**

PART A: Answer all the questions. Each carries *one* mark.

Choose the correct answer.

1. Which of the following is used to define a code block in Python.

   A) Def B) Indentation C) { } D) Begin - end

2. The _____ is used to generate a sequence of numbers in Python.

   A) Range() B) Sequence() C) Rand() D) Eval()

3. In Python, anonymous functions are created using_____.

   A) Sys B) Anonym C) Def D) Lambda

4. Which of the following is used to create an empty set in Python?

   A) Set() B) { } C) ( ) D) {empty}

5. The symbol used for single line comment in Python is_____.

   A) // B) /// C) # D) #!

Fill in the Blanks.

6. Expand IDLE.
7. The keyword used to create a user defined function is _____.
8. Give two examples for built in modules in Python.
9. Write a python statement to read an integer value from the keyboard.
10. Who developed Python Programming Language?

(10 x 1 = 10 Marks)

PART B: Answer any *eight* questions. Each carries *two* marks.

11. What is boolean expression?
12. Write the syntax and usage of for loop?
13. What is use of pass statement in Python?
14. Differentiate between a statement and an expression.
15. Discuss the rules for naming an identifier.

16. Enumerate the standard data types in Python.
17. List any four features of Python.
18. Differentiate raw input() and input().
19. What are keyword arguments?
20. Explain how a dictionary is created in Python.

(8 x 2 = 16 Marks)

PART C: Answer any *six* questions. Each carries *four* marks.

21. Write a program to check whether a given year is leap year or not.
22. Explain the syntax of print statement in Python.
23. What are packages? Illustrate package creation in Python.
24. Explain how exceptions are handled in Python with an example.
25. Describe string slicing with example.
26. Discuss the uses of break and continue statements in Python.
27. Write a recursive function to multiply two numbers.
28. Discuss how class and objects are created in Python.

(6 x 4 = 24 Marks)

PART D: Answer any *two* questions. Each carries *fifteen* marks.

29. What is a Set? Discuss different operations performed on a Set with example.
30. Explain creation, accessing and deletion of following sequences with examples.
    (a) List (b) Tuple
31. What are the basic string operations that can be performed in Python? Explain with example.

(2 x 15 = 30 Marks)