

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023

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.**

- Who developed Python Programming Language?
a) Wick van Rossum b) RasmusLerdorf c) Guido van Rossum d) NieneStom
- All keywords in Python are in _____
a) Capitalized b) Lower case c) Upper case d) None of the mentioned
- What are the values of the following Python expressions?
2**(3**2)
(2**3)**2
2**3**2
a) 512, 64, 512 b) 512, 512, 512 c) 64, 512, 64 d) 64, 64, 64
- What will be the output of the following Python code?
>>>t=(1,2,4,3)
>>>t[1:3]
a) (1, 2) b) (1, 2, 4) c) (2, 4) d) (2, 4, 3)
- Which of the following statements is used to create an empty set?
a) { } b) set() c) [] d) ()

Fill in the Blanks.

- _____ character is used to give single-line comments in Python?
- _____ keyword is used to add an alternative condition to an if statement.
- How many times will the loop run? _____
i=2
while(i>0):
i=i-1
- Suppose listExample is ['h','e','l','l','o'], len(listExample) is _____.
- _____ represents an entity in the real world with its identity and behaviour.

(10 x 1 = 10 Marks)**PART B: Answer any *eight* questions. Each carries *two* marks.**

- What is meant by python numbers?
- Give the characteristics of membership operator.
- Define range() function with example.
- Give the precedence rule for Boolean expression.

(PTO)

15. Give an example of package creation in Python.
16. Define reload() function in a module.
17. What are formal and actual arguments?
18. Define global keyword. List out the basic rules for global keywords in python.
19. How does del operation work on dictionaries? Give an example.
20. Explain the following methods in tuple with example.
 - (i) count()
 - (ii) index()

(8 x 2 = 16 Marks)

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

21. Differentiate between mutable and immutable objects in Python language with example.
22. Develop a program to find the largest among three numbers.
23. Explain multi-way decision statement in python. Write syntax with example.
24. Explain about the import statement in modules.
25. What are Built-In modules in python? Give examples.
26. How do we achieve code reusability in python? Write a python code to explain code reusability.
27. List out four different methods supports in python List. Illustrate all the methods with an example.
28. Explain the concepts of classes, attributes and methods in Python, with suitable examples.

(6 x 4 = 24 Marks)

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

29. Which are the different types of operators in python language? Explain with examples.
30. Explain Indexing and Slicing operation for string manipulation with example in python.
31. (a) List some few common Exception types and explain when they occur.
(b) Differentiate between Raising and User defined exceptions in python.

(2 x 15 = 30 Marks)