

**END TERM EXAMINATION****THIRD SEMESTER (BCA) JANUARY-2024****Paper Code: BCAT-211****Subject: Basic of Python Programming****Time: 3 Hours****Maximum Marks :75**

**Note: Attempt five questions in all including Q.no.1 which is compulsory.  
Select one question from each unit.**

- Q 1 Write short notes on the following: (Any Five) (5×5=25)
- (a) Elaborate - "Python is interpreted as well as integrated programming language"?
  - (b) How unary operator different from binary operator? Give example of each.
  - (c) Explain the use of `_init_` method in python programming?
  - (d) Differentiate between list and tuple?
  - (e) Explain the use of pandas library with an example?
  - (f) Justify the significance of self keyword? Give an example?

**UNIT-I**

- Q2 (a) Explain while loop and for loop with an example. Elaborate difference between them. (4.5)  
(b) Explain membership operator, identity operator, escape sequence, slicing with an example? (8)
- Q3 (a) Perform following slicing operation on string "PYTHON PROGRAMMING":  
string[2:15:2], string[-3:-16:-2], string[:13], string[6:], string[:-2], string[3:14:3] (6)  
(b) Write a program to print stars in right triangle pattern (value enter by user)? (6.5)

**UNIT-II**

- Q4 (a) Differentiates between mutable and immutable objects with examples? (4.5)  
(b) Explain tuple, list, sets, dictionary in python? Each with example. (8)
- Q5 (a) Explain list methods- append, extend, remove, index, pop, insert, sort? Give example of each? (6.5)  
(b) Explain dictionary methods- len, str, clear, copy, update, get? Give an example of each. (6)

**UNIT-III**

- Q6 Explain the concept of class, objects, functions, data member with help of program? Also Explain call by Value and call by reference? (12.5)
- Q7 Explain the following terms with examples: (12.5)
- (i) Scope and lifetime of a function.
  - (ii) Importing modules
  - (iii) Formal, Actual, Default, keyword arguments
  - (iv) Concept of modules

**UNIT-IV**

- Q8 (a) Elaborate the importance of pip command to install any library in python? (4.5)  
(b) By using NumPy library in program, perform the following operations:-  
Creation of 1D array, Re-shaping of an Array, Array Slicing, Aggregate Operations. (8)
- Q9 (a) Explain file modes of file handling? Give example of each? (4.5)  
(b) Explain the use of NumPy, Pandas, Matplotlib in python programming? Give example of each? (8)

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