23COE628

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION MAY 2025
(Sixth Semester)

Branch – e-COMMERCE

BASICS OF PYTHON PROGRAMMING

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks (5 x 1 = 5)

1. Define the term "interactive mode" in Python.
   (i) A mode where Python code is written in a script and then executed
   (ii) A mode that allows for direct interaction with the Python interpreter
   (iii) A mode used to run Python code on a web server
   (iv) mode used to execute Python code only in a file

2 Which of the following keywords is used to stop a loop in Python?
   (i) stop (ii) break
   (iii) exit (iv) end

3 Find the output of from the code:
   (i) [10, 25, 30] (ii) [10, 20, 30]
   (iii) [25, 20, 30] (iv) [10, 20, 25]

4 Name the operation that combines two tuples in Python.
   (i) concat() (ii) +
   (iii) merge() (iv) append()

5 Find out the term of exception in python.
   (i) A special object that is used to print error messages
   (ii) A mechanism used to handle runtime errors
   (iii) A tool to debug Python code
   (iv) A function that is called when an error occurs

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6 a Outline the list and tuple in Python, focusing on mutability, performance, and use cases where one is more appropriate than the other.

OR

b Explain the difference between syntax errors, runtime errors, and logical errors in Python. Provide an example for each type of error and how to debug it.

7 a Describe how the if-elif-else conditional works in Python and provide an example.

OR

b Develop a Python function that takes a list of integers as input and returns a list containing only the even numbers from the input list.

8 a Organize the following list operations in the correct sequence to append an element, remove an element, and sort the list:
lst.append(5), lst.remove(2), lst.sort()

OR

b Classify the following Python data types into immutable and mutable categories:
String, List, Tuple, Set

Cont...

9 a Outline the process of creating a dictionary, adding a new key-value pair, and removing a key-value pair.

OR

b Explain the concept of tuple assignment in Python and demonstrate it with an example.

10 a Explain the role of the finally block in exception handling in Python. Give an example where the finally block is used after reading from a file.

OR

b Describe how the format() function is used in Python to format strings while writing to a file. Give an example where the function is used to write user details into a text file.

SECTION - C (30 Marks)

Answer any **Three** questions
ALL questions carry **EQUAL** Marks (3 x 10 = 30)

11 Justify why Python is considered a multi-paradigm programming language.

12 Explain the concept of recursion in Python with an example. How does recursion work, and what are the common pitfalls?

13 Identify the key differences between list slicing and string slicing. Provide examples of both.

14 Categorize the following operations as either mutable or immutable in Python:
1. List operations (append(), remove())
2. Tuple operations (count(), index())
3. Dictionary operations (update(), pop())
4. String operations (upper(), replace())

15 Enumerate the following file modes in Python and explain when to use each:
'r', 'w', 'a', 'rb'

Z-Z-Z END