PYTHON

Python – LTIMindtree Associate Trainee SPECIFIC QUESTIONS & ANSWERS

◈ PART 1

Q1. Why Python is widely used in service companies?

Answer:
Python is used because it is easy to learn, fast to develop, and has strong libraries for automation, data processing, and scripting.

Q2. Is Python compiled or interpreted?

Answer:
Python is both. Source code is compiled into bytecode, then interpreted by the Python Virtual Machine.

Q3. How does Python manage memory?

Answer:
Python uses automatic memory management with reference counting and garbage collection.

Q4. What is dynamic typing?

Answer:
In Python, variable type is decided at runtime, not at compile time.

Q5. What does LTIMindtree expect from a Python fresher?

Answer:

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Clear fundamentals, problem-solving ability, understanding of logic, and readiness to learn frameworks/tools as per project.

◈ PART 2

CORE PYTHON INTERVIEW QUESTIONS (ANY COMPANY / ANY ROLE)

ఇవి EVERGREEN QUESTIONS.
ఇవి రాకపోతే Python fundamentals weak.

Q1. What is Python?

Answer:
Python is a high-level, interpreted programming language known for simple syntax and readability.

Q2. Difference between list and tuple?

Answer:
List is mutable. Tuple is immutable.

Q3. What is dictionary?

Answer:
Dictionary stores data in key-value pairs.

Q4. What is function?

Answer:

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Function is a block of code that performs a specific task and can be reused.

Q5. What is module?

Answer:
Module is a file containing Python code such as functions and variables.

Q6. What is exception handling?

Answer:
Handling runtime errors using try, except, finally blocks.

Q7. What is indentation and why important?

Answer:
Indentation defines code blocks. Without proper indentation, Python throws error.

Q8. What is PVM?

Answer:
Python Virtual Machine executes Python bytecode.

◈ PART 3

BASIC – CRITICAL – PROGRAMMING (3 TYPES)

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◈ A. BASIC PYTHON QUESTIONS (Foundation Check)

1. What is variable in Python?
Ans: Name used to store value in memory.

2. Do we need data type declaration?
Ans: No, Python is dynamically typed.

3. What is loop?
Ans: Repeats block of code.

4. What is list?
Ans: Ordered, mutable collection.

5. What is tuple?
Ans: Ordered, immutable collection.

◈ B. CRITICAL PYTHON QUESTIONS (Elimination Level)

Q1. Why Python is slower than C?

Answer:
Python is interpreted and dynamically typed, while C is compiled.

Q2. What happens if indentation is wrong?

Answer:
Program throws IndentationError and stops execution.

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Q3. Difference between = and ==?

Answer:
= assigns value. == compares values.

Q4. What is garbage collection?

Answer:
Automatic removal of unused objects from memory.

Q5. What is mutable vs immutable?

Answer:
Mutable objects can be changed; immutable cannot.

Q6. What is shallow copy vs deep copy?

Answer:
Shallow copy copies references. Deep copy copies actual objects.

◈Python. PROGRAMMING LOGIC QUESTIONS (Explain Logic – NOT Syntax)

> Syntax perfect అవసరం లేదు
Logic explain చేయాలి

PYTHON

1. Reverse a string

Logic:
Traverse string from end to start or use slicing.

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2. Check palindrome

Logic:
Compare string with its reverse.

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3. Find largest number in list

Logic:
Initialize max variable and compare in loop.

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4. Count frequency of characters

Logic:
Use dictionary to count occurrences.

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5. Remove duplicates from list

Logic:
Use set or loop with temporary list.

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6. Find sum of digits in a number

Logic:

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Use modulo and division in loop.

⬤ PYTHON – CRITICAL INTERVIEW POINTS (LECTURER CHECKLIST)

Execution flow (source → bytecode → PVM)

list vs tuple vs dict clarity

Indentation importance

Dynamic typing explanation

Honest "can learn" attitude

☞ If student fails here → Python interview risk.