

**Python Basics Test**

**Total Marks: 20**

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**Section A: Theory Questions (10 Marks)**

**Answer the following questions concisely. Ensure clarity and include examples where required.**

1. (2 Marks)

Explain two functions of the eval() function in Python.

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2. (2 Marks)

Explain two key differences between mutable and immutable data types.

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3. (2 Marks)

The print() function allows multiple arguments to be separated by a custom separator. How can this feature be advantageous in code?

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4. (2 Marks)

List and explain any three different data types available in Python, each with one key point. Additionally, explain the difference between a float and a string with an example.

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5. (2 Marks)

What is type casting in Python? Explain any three type-casting functions (int(), float(), str()) with examples.

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### Section B: Practical Questions (10 Marks)

Question 1: (6 Marks)

Write a Python program that:

1. Collects the user's name, age, height (in cm), and weight (in grams) using input().
2. Calculates the sum of the height (converted to meters) and weight (converted to kilograms).
3. Represents the user's height and weight as a complex number for visualization.
4. Displays the outputs using print().
5. Includes meaningful comments for clarity.

Question 2: (2 Marks)

Write a Python program that prints the following numbers in a single line, separated by commas: 12, 25, 37, 50.

Question 3: (2 Marks)

Write a Python program that demonstrates the use of the type() function.

1. Create variables of three different types: integer, string, and float.
2. Use the type() function to display the data type of each variable.

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#### Instructions:

- Ensure your answers in Section A are clear and concise. Provide examples wherever applicable.
- In Section B, include comments and write clean, readable code.
- Explaining the question will take no marks, but providing hints or additional information will result in a deduction of 0.5 to 2 marks depending on the question.