**PRACTICE SHEET**

**TUPLE**

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| **D11+D12+D13** |

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| **Question No 1a:**  **Create a tuple named my\_tuple with elements 10, 20, and 30.** |
| **Source Code:**  **my\_tuple = (10,20,30)** |
| **Sample Input and Output:**  **creating a tuple does not give any output** |
| **Screenshot of the Output:** |

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| **Question No 1b:**  **Access the second element of the tuple my\_tuple** |
| **Source Code:**  **print (my\_tuple[1])** |
| **Sample Input and Output:**  **20** |
| **Screenshot of the Output:** |

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| **Question No 1c:**  **Concatenate the tuple my\_tuple with a new tuple (40, 50) and**  **store the result in a new variable named combined\_tuple.** |
| **Source Code:**  **new\_tuple = (40,50)**  **combined\_tuple = my\_tuple + new\_tuple**  **print (combined\_tuple)** |
| **Sample Input and Output:**  **(10, 20, 30, 40, 50)** |
| **Screenshot of the Output:** |

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| **Question No 1d:**  **Unpack the elements of the tuple combined\_tuple into separate variables a, b, c, d, and e.** |
| **Source Code:**  **(a,b,c,d,e) = combined\_tuple**  **print (a,b,c,d,e)** |
| **Sample Input and Output:**  **10 20 30 40 50** |
| **Screenshot of the Output:** |

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| **Question No 1e:**  **Find the index of element 30 in the tuple combined\_tuple.** |
| **Source Code:**  **print (combined\_tuple.index(30))** |
| **Sample Input and Output:**  **2** |
| **Screenshot of the Output:** |

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| **Question No 1f:**  **Count the number of occurrences of element 20 in the tuple combined\_tuple.** |
| **Source Code:**  **print (combined\_tuple.count(20))** |
| **Sample Input and Output:**  **1** |
| **Screenshot of the Output:** |

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| **Question No 1g:**  **Convert the tuple combined\_tuple to a list named my\_list.** |
| **Source Code:**  **my\_list = list(combined\_tuple)**  **print (my\_list)** |
| **Sample Input and Output:**  **[10, 20, 30, 40, 50]** |
| **Screenshot of the Output:** |

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| **Question No 1h:**  **Check if element 40 is present in the tuple combined\_tuple.** |
| **Source Code:**  **if 40 in combined\_tuple:**  **print ("element is present")**  **else:**  **print ("element is not present")** |
| **Sample Input and Output:**  **element is present** |
| **Screenshot of the Output:** |

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| **Question No 1i:**  **Create a new tuple named sliced\_tuple containing elements**  **from index 1 to 4 (inclusive) from the combined\_tuple.** |
| **Source Code:**  **sliced\_tuple = (combined\_tuple[1:5])**  **print (sliced\_tuple)** |
| **Sample Input and Output:**  **(20, 30, 40, 50)** |
| **Screenshot of the Output:** |

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| **Question No 1j:**  **Multiply each element of the tuple my\_tuple by 3 and**  **store the result in a new tuple named multiplied\_tuple.** |
| **Source Code:**  **my\_tuple = (10,20,30)**  **my\_list = list(my\_tuple)**  **i = 0**  **for a in my\_list:**  **my\_list[i] = a\*3**  **i = i + 1**    **multiplied\_tuple = tuple(my\_list)**  **print (multiplied\_tuple)** |
| **Sample Input and Output:**  **(30, 60, 90)** |
| **Screenshot of the Output:** |

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| **Question No 2:**  **Write a program that concatenates two tuples and prints the result.** |
| **Source Code:**  **print (my\_tuple + multiplied\_tuple)** |
| **Sample Input and Output:**  **(10, 20, 30, 30, 60, 90)** |
| **Screenshot of the Output:** |

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| **Question No 3:**  **Write a program that demonstrates tuple packing and unpacking.** |
| **Source Code:**  **(a,b,c) = multiplied\_tuple**  **t1 = (a,b,c)**  **print (a,b,c)**  **print (t1)** |
| **Sample Input and Output:**  **30 60 90**  **(30, 60, 90)** |
| **Screenshot of the Output:** |

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| **Question No 4:**  **Write a program that replicates elements in a tuple.** |
| **Source Code:**  **replicated\_tuple = t1\*3**  **print (replicated\_tuple)** |
| **Sample Input and Output:**  **(30, 60, 90, 30, 60, 90, 30, 60, 90)** |
| **Screenshot of the Output:** |

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| **Question No 5:**  **Write a program that slices a tuple to get a subset of elements.** |
| **Source Code:**  **print (replicated\_tuple[1:6])** |
| **Sample Input and Output:**  **(60, 90, 30, 60, 90)** |
| **Screenshot of the Output:** |

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| **Question No 6:**  **Write a program that compares two tuples.** |
| **Source Code:**  **if t1 == multiplied\_tuple:**  **print ("tuples are same")**  **else:**  **print ("tuples are different")** |
| **Sample Input and Output:**  **tuples are same** |
| **Screenshot of the Output:** |

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| **Question No 7:**  **Write a program that checks if an element is present in a tuple.** |
| **Source Code:**  **if 40 in combined\_tuple:**  **print ("element is present")**  **else:**  **print ("element is not present")** |
| **Sample Input and Output:**  **element is present** |
| **Screenshot of the Output:** |

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| **Question No 8:**  **Write a program that calculates the length of a tuple.** |
| **Source Code:**  **print (len(replicated\_tuple))** |
| **Sample Input and Output:**  **9** |
| **Screenshot of the Output:** |

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| **Question No 9:**  **Write a program that unpacks elements from a tuple.** |
| **Source Code:**  **(a,b,c,d,e) = combined\_tuple**  **print (a,b,c,d,e)** |
| **Sample Input and Output:**  **10 20 30 40 50** |
| **Screenshot of the Output:** |

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| **Question No 10:**  **Write a program that uses nested tuples.** |
| **Source Code:**  **new\_tuple = (4,2,6,t1,4,5,245,5)**  **print (new\_tuple)** |
| **Sample Input and Output:**  **(4, 2, 6, (30, 60, 90), 4, 5, 245, 5)** |
| **Screenshot of the Output:** |