

ID: 253-16-017  
 Section: 23(A)  
 Date: 23-11-25



Marks: 11

Department of Computing and Information System (CIS)

Class Test-2, Fall 2025

Course Code: CIS121, Course Title: Introduction to Industry 4.0

Time: 30 Minutes

Marks: 15

1. Write the output of the following codes:

[2.5 × 2]

a) `total = 0`  
`for i in range(5):`  
 `if i == 3:`  
 `continue`  
 `total = total + i`  $0+1+2+4+5$   
`print("Total:", total)`

Output: Total: 12

b) `numbers = [10, 20, 30, 40, 50]`  $15$   $60$   
`numbers[3] = 60`  
`numbers.append(70)`  
`numbers.insert(1, 15)`  
`print("Updated list:", numbers)`

Output: Updated list: [10, 15, 20, 30, 60, 50, 70]

2. Explain the similarities between list and tuple with example.

[4]

There are few similarities between list and tuple.

① Different types of data (int, string, float) can be inserted inside both list and tuple. e.g: `list = [1, 2.2, 'diu']`, `tuple = (1, 2.2, 'diu')`.

② In list data can be inserted at the end of the list using `append()`. In the same way data can be inserted at the end of the tuple using `+=`.

③ List:

`lst = [1, 2, 5]`  
`lst.append(2)`  
`print(lst)`

Output: [1, 2, 5, 2]

Tuple:

`tpl = (1, 5, 7, 8)`

`tpl += (10,)`

`print(tpl)`

Output: (1, 5, 7, 8, 10)

④ Both list and tuple needs to be set inside brackets and separated by comma.

List:

`lst = [0, 2, 3]`

Tuple:

`t = (1, 2, 'diu')`

3. Write a Python program to determine bus fare based on distance traveled using the following rules: [6]

- i. Distance  $< 5$  km  $\rightarrow$  10 Taka
- ii. Distance 5 to 10 km  $\rightarrow$  20 Taka
- iii. Distance 11 to 20 km  $\rightarrow$  30 Taka
- iv. Distance 21 to 50 km  $\rightarrow$  50 Taka
- v. Distance  $> 50$  km  $\rightarrow$  100 Taka

Sample Input: 15

Sample Output: 30 Taka

Note: The distance must be taken from the user using the input() command and the bus fare should be calculated based on the given rules.

```
dist = 0  
print(input("Enter the distance:", dist))
```

```
if dist < 5 :  
    print("10 Taka")
```

```
elif dist <= 10 :  
    print("20 Taka")
```

```
elif dist <= 20 :  
    print("30 Taka")
```

```
elif dist <= 50 :  
    print("50 Taka")
```

```
elif dist  
else:  
    print("100 Taka")
```