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Marks: 08

Department of Computing and Information System (CIS)

Class Test-2, Spring 2026

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

Time: 30 Minutes | Marks: 15

Name: N. M. Nayem - Ul - Islam	ID: 261-16-032
Section: A	Date: 2-4-26

1. Write any three operators used in Python with examples. [3]

(+) Addition • + used to sum as a valye. Ex: x+y

(-) Subtraction • used to subtract the value Ex: x-y

(*) Multiplication • used to multiply the value Ex: x*y

2. Create a Pandas DataFrame using the following student data:

Student_ID	Name	English	Industry	Math
001	Ahad	67	73	93
002	Mubin	76	80	72
003	Sami	90	78	65
004	Ratul	82	88	87

a) Write Python code to display the DataFrame. [5]

b) Find the Average marks of Industry course. [2]

input pandas as pd

a)
```
data = {"student.ID"[001, 002, 003, 004]; "Name"[Ahad, Mubin, Sami, Ratul]; "English"[67, 76, 90, 82]; "Industry"[73, 80, 78, 88]; "Math"[93, 72, 65, 87]}

print('data')
print=& pd.DataFrame('data')
```

b)
```
print("Average : pd.DataFname[&"Industry"].mean())
```

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3. Write a Python program to determine the cost of an electricity bill based on the number of units consumed: [5]

   a) *Units < 50 → 100 Taka*
   b) *Units 50 to 100 → 200 Taka*
   c) *Units 101 to 200 → 400 Taka*
   d) *Units 201 to 300 → 600 Taka*
   e) *Units > 300 → 800 Taka*

Sample Input: 150

Sample Output: 400 Taka

Note: Take the number of units from the user using *input()* and calculate the bill according to the rules.

```
cost = input ('unit')

if cost units < 50
    print ("100 taka")

elif unit < 101
    print (" 200 taka")

elif unit < 201
    print (" 400 taka")

elif unit <301
    print (" 600 taka")

else prin
    print (" 800 taka")
```