

PYTHON FOR DATA SCIENCE

Assignment – 1

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1. MCQ (1 mark each)

Q1. Which of the following is a valid variable name in Python?

- a) 2salary
- b) salary_2
- c) salary-2
- d) @salary

Answer: b) salary_2

Q2. What is the output of the expression `7 % 3` in Python?

- a) 2
- b) 1
- c) 3
- d) 0

Answer: b) 1

2. Descriptive Questions

Q3. (5 Marks)

Write a Python program to:

- Assign values 10 and 3 to variables a and b.
- Perform addition, subtraction, multiplication, and division.
- Print the results.

Answer:

```
a = 10
```

```
b = 3
```

```
print("Addition:", a + b)
```

```
print("Subtraction:", a - b)
```

```
print("Multiplication:", a * b)
```

```
print("Division:", a / b)
```

Q4. (7 Marks)

Consider the following code:

```
x = "Python"
```

```
print(x[0])
```

```
print(x[-1])
```

```
print(x[2:5])
```

- Write the output of the above code.
- Explain briefly how indexing and slicing work in Python strings.

Answer:

Output:

P

n

tho

Explanation:

- `x[0]` → returns the first character "P".
- `x[-1]` → returns the last character "n".

- `x[2:5]` → returns substring from index 2 to 4 → "tho".
Indexing allows accessing individual characters, while slicing extracts a range of characters.