

## Python for Data Science

### Week 1

1. What is the output of the following code?

[1 marks]

```
a = 3
b = "12"

print(a*b)
```

- (a) 36
- (b) 121212
- (c) 123
- (d) Error: Invalid operation, unsupported operator '\*' used between 'int' and 'str'

Answer: (b)

2. What is the output of the following code?

[1 marks]

```
a = -9//7
print(a)
```

- (a) -1
- (b) -2
- (c) -1.28
- (d) 1.28

Answer: (b)

3. Consider a following code snippet. What is a data type of  $y$ ? [1 marks]

```
x = 15  
y = str(float(x))
```

- (a) int
- (b) float
- (c) str
- (d) Code will throw an error.

Answer: (c)

4. Which of the following variable names are INVALID in Python? [1 mark]

- (a) 1\_variable
- (b) variable\_1
- (c) variable1
- (d) variable#

Answer: a, d

5. While naming the variable, use of any special character other than underscore(\_) will throw which type of error? [1 mark]

- (a) Syntax error
- (b) Key error
- (c) Value error
- (d) Index error

Answer: a

6. Let  $x = \text{"Mayur"}$ . Which of the following commands converts the 'x' to float datatype? [1 mark]

- (a) `str(float,x)`
- (b) `x.float()`
- (c) `float(x)`
- (d) Cannot convert a string to float data type

Answer: d

7. Which Python library is commonly used for data wrangling and manipulation? [1 mark]

- (a) Numpy
- (b) Pandas
- (c) scikit
- (d) Math

Answer: b

8. Predict the output of the following code. [1 mark]

```
x = 10
y = 5
z = 3

ans = x + y % z

print(ans)
```

- (a) 12.0
- (b) 12
- (c) 11.667
- (d) 11

Answer: b

9. Given two variables, **j = 6** and **g = 3.3**. If both normal division and floor division operators were used to divide **j** by **g**, what would be the data type of the value obtained from the operations? [1 point]

- (a) int, int
- (b) float, float
- (c) float, int
- (d) int, float

Answer: b

10. Let  $a = 5$  (101 in binary) and  $b = 3$  (011 in binary). What is the result of the following operation? [1 mark]

```
a = 5
b = 3

print(a & b)
```

- (a) 3
- (b) 7
- (c) 5
- (d) 1

Answer: d