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**Each question carry equal marks.
Please answer briefly.**

Q1. What type of errors do occur in Python, write the a program with different types of errors as well as write separate correction code?

Ans : Following type of errors occurs in python

- 1 Syntax error
- 2 Logical error
- 3 Runtime error

Syntax error

```
In [1]: Var = What is your name
```

```
File "<ipython-input-1-d6247dcc508f>", line 1
  Var = What is your name
                ^
SyntaxError: invalid syntax
```

```
In [2]: Var = "What is your name"
```

Logical error

```
In [3]: a=10
        b=10
        c=a+b/0
        print(c)
```

```
-----
ZeroDivisionError                                Traceback (most recent call last)
<ipython-input-3-b9bbd4381738> in <module>
      1 a=10
      2 b=10
----> 3 c=a+b/0
      4 print(c)

ZeroDivisionError: division by zero
```

```
In [4]: a=10
        b=10
        c=a+b/2
        print(c)
```

15.0

Runtime error

```
In [5]: String = "My name is Bilal"
        Designation = "Student"
        print (String)
        print(Job)
```

My name is Bilal

```
-----
NameError                                        Traceback (most recent call last)
<ipython-input-5-a42205d9a1e4> in <module>
      2 Designation = "Student"
      3 print (String)
----> 4 print(Job)

NameError: name 'Job' is not defined
```

```
In [6]: String = "My name is Bilal"
        Designation = "Student"
        print (String)
        print(Designation)
```

My name is Bilal
Student

Q2. What are Boolean String test, write the code for each Boolean string test code?

Ans : A string in Python can be tested for truth value. The return type will be in Boolean value (True or False)

The following are the Boolean string test:

1. .isalpha()

```
In [12]: StringTest = "Hello"  
print(StringTest.isalpha())  
  
True
```

2. .isalnum()

```
In [10]: StringTest = "Hello Qazi Bilal. How are you"  
print(StringTest.isalnum())  
  
False
```

3. .isdigit()

```
In [16]: StringTest = "2399"  
print(StringTest.isdigit())  
  
True
```

4. .istitle()

```
In [18]: StringTest = " The Collage "  
print(StringTest.istitle())  
  
True
```

5. .isupper()

```
In [20]: StringTest = " THE COLLAGE "  
print(StringTest.isupper())  
  
True
```

6. .islower()

```
In [21]: StringTest = " THE COLLAGE "  
print(StringTest.islower())
```

False

7. .startswith()

```
In [29]: StringTest = " qazibilal "  
print(StringTest.startswith('A'))
```

False

8. .endswith()

```
In [32]: StringTest = " qazibilal "  
print(StringTest.endswith("b"))
```

False

Q3. What is formatting string input mean in Python . write a program in which formatting string input is used?

ANS:

By Formatting String input mean that to arrange the input that is entered in a specific format and pattern

For example

```
In [7]: Name = input("What is your Name ").capitalize()
print(Name)
```

What is your Name AWAIS
Awaiss

```
In [8]: Married= input("Are U Married ").upper()
print(Married)
```

Are U Married No
NO

```
In [9]: Job= input("Are U Employeed ? ").lower()
print(Job)
```

Are U Employeed ? YES
yes
