

SSD – Monsoon 2024
Python Lab Activity (15 Marks)
Duration : 30 minutes

Instructions:

1. Write your answers in a text file with question number and correct option. Example:

1. A

2. B

2. Save the file with your roll no. Example 2021101005.txt

3. Upload your text file to Moodle.

1. Which of the following statements correctly defines a class in Python?

- A) class Car():
 - B) class Car:
 - C) class Car{}
 - D) define class Car
-

2. What will be the output of the following code?

python

for i in range(3):

for j in range(2):

print(i, j)

- A) 0 1 2
 - B) 0 0, 1 1
 - C) 0 0, 0 1, 1 0, 1 1, 2 0, 2 1
 - D) Error
-

3. In a nested loop, which loop runs more frequently?

- A) Outer loop
 - B) Inner loop
 - C) Both run the same number of times
 - D) Depends on the condition
-

4. What does self represent in a Python class method?

- A) The class itself
 - B) A global variable
 - C) The current instance of the class
 - D) An arbitrary keyword
-

5. What will be the output of the following code?

```
python
```

```
x = 10
```

```
if x > 5:
```

```
    if x < 15:
```

```
        print("x is between 5 and 15")
```

```
    else:
```

```
        print("x is greater than 15")
```

```
else:
```

```
    print("x is less than or equal to 5")
```

- A) x is between 5 and 15
- B) x is greater than 15
- C) x is less than or equal to 5
- D) None of the above

6. What is the purpose of the __init__ method in Python classes?

- A) To initialize the class
- B) To define class attributes

- C) To act as a destructor
 - D) To define public variables
-

7. What is the output of this code?

```
python
```

```
x = 1
```

```
while x < 3:
```

```
    x += 1
```

```
    if x == 2:
```

```
        continue
```

```
    print(x)
```

- A) 1
 - B) 2
 - C) 3
 - D) Error
-

8. Which keyword is used in Python to inherit a class?

- A) inherit
 - B) extends
 - C) superclass
 - D) class ChildClass(ParentClass)
-
-

9. What is the result of the following code?

```
python
```

```
for i in range(3):
```

```
    if i == 1:
```

```
        break
```

```
    print(i)
```

- A) 0
 - B) 0 1
 - C) 0 1 2
 - D) No output
-
-

10. What is an instance variable in Python?

- A) A variable declared inside a class but outside any method
 - B) A variable declared within a method of a class
 - C) A variable declared within a function outside a class
 - D) None of the above
-
-

11. In a nested loop, if the outer loop runs 3 times and the inner loop runs 2 times, how many times will the inner loop execute in total?

- A) 2
 - B) 3
 - C) 5
 - D) 6
-

12. What is the result of `3 % 2` in Python?

- A) 0
 - B) 1
 - C) 2
 - D) 3
-
-

13. Which statement correctly checks if an object `obj` is an instance of class `A`?

- A) `obj is A`
 - B) `type(obj) == A`
 - C) `obj.type(A)`
 - D) `isinstance(obj, A)`
-

14. What will be the output of the following code?

python

```
class MyClass:
```

```
    def __init__(self):
```

```
        self.value = 10
```

```
    def update(self):
```

```
        self.value += 5
```

```
obj = MyClass()
```

```
obj.update()
```

```
print(obj.value)
```

- A) 5
- B) 10
- C) 15
- D) Error

15. Which special variable can you check to determine if your Python program was executed interactively or imported by another Python program?

- A. `__main__`
- B. `__imported__`
- C. `__interactive__`
- D. `__name__`