

1 Multiple Choice Questions (40 Points) - (LO 1)

Each correct answer: 4 points

1. Which of the following options is the correct way to assign a value of 5 to a variable named my_variable?

- A. my_variable == 5
- B. my_variable = 5
- C. my_variable := 5
- D. my_variable => 5

2. What is the correct syntax for a basic if-else statement in Python?

- A.

```
if (condition);  
...  
else (condition);  
...
```
- B.

```
if condition:  
...  
else condition:  
...
```
- C.

```
if (condition):  
...  
else:  
...
```
- D.

```
if (condition):  
...  
else:  
...
```

3. What will the following code print?

```
x = 5  
y = 12  
if (x >= y):  
    print("x is greater or  
        equal to y")  
else:  
    print("x is less than y")
```

- A. x is greater or equal to y
- B. x is less than y
- C. Error
- D. No output

4. Which of the following is a valid way to create a single-line comment in Python?

- A. # This is a comment
- B. /* This is a comment */
- C. // This is a comment
- D. <!-- This is a comment -->

5. Which operator is used to concatenate strings in Python?

- A. &
- B. +
- C. ,
- D. %

6. Given the following code, what will be printed?

```
a = 4
a *= 3
a -= 2
print(a)
```

- A. 12
- B. 10
- C. 8
- D. 14

7. Which statement correctly describes operator precedence in Python

- A. All operators have the same level of precedence.
- B. Operations are always evaluated left to right, regardless of precedence.
- C. Parentheses do not affect operator precedence.
- D. Multiplication and division have higher precedence than addition and subtraction.

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

- A. 1st_name
- B. first name
- C. first_name
- D. first-name

9. What will happen if you try to use a variable before assigning it a value in Python?

- A. The variable will be automatically assigned a default value.
- B. An error will be raised.
- C. The variable will be assigned the value None.
- D. The variable will be treated as a string.

10. What is the output of the following code?

```
x = "10"
y = "5"
print(x + y)
```

- A. 15
- B. 10 5
- C. 105
- D. Error

2 Multiple Choice Questions (40 Points) - (LO 2)

Each correct answer: 4 points

11. What will be the output of the following code snippet?

```
numbers = [1, 2, 3, 4, 5]
total = 0
for number in numbers:
    if number % 2 == 0:
        total += number
print(total)
```

- A. 2
- B. 9
- C. 6
- D. 15

12. What will be the output of the following code snippet?

```
total = 0
for i in range(4):
    total += i
print(total)
```

- A. 4
- B. 6
- C. 8
- D. 10

13. What will be the output of the following code snippet?

```
total = 0
for i in range(4):
    total *= i
print(total)
```

- A. 0
- B. 6
- C. 12
- D. 24

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

```
for x in range(1, 4):
    for y in range(2, 4):
        print(x * y, end=' ')
```

- A. 2 3 4 4 6 8 6 9 12 8 12 16
- B. 2 3 4 6 6 9
- C. 6 9
- D. 2 3 4 6 6 9 8 12

15. What will be the output of the following code snippet?

```
i = 0
while i < 3:
    print(i, end=' ')
    i += 1
else:
    print('Done')
```

- A. 0 1 2
- B. 0 1 2 3 Done
- C. 0 1 2 Done Done
- D. 0 1 2 Done

16. What will be the output of the following code snippet?

```
result = 0
for i in range(1, 6):
    result += i
    if i % 2 == 0:
        result -= 1
print(result)
```

- A. 12
- B. 13
- C. 14
- D. 15

17. Which of the following code snippets will only print the sum of all odd numbers from 1 to 20 (inclusive)?

```
#I.
total = 0
for i in range(1, 21):
    if i % 2 != 0:
        total += i
print(total)

#II.
total = 0
for i in range(1, 20, 2):
    total += i
print(total)

#III.
total = 0
i = 1
while i < 20:
    total += i
    i += 2
print(total)
```

- A. Only I
- B. Only II
- C. I and II
- D. All of the above

18. What will be the output of the following code snippet?

```
count = 1
for num in range(10):
    if num % 3 == 0:
        continue
    count += 1
print(count)
```

Name & Surname:

- A. 10
- B. 9
- C. 7
- D. 6

19. Which of the following code snippets will print "0 1 2" as the output?

```
#I.  
for i in range(3):  
    print(i, end=" ")  
  
#II.  
for i in range(5):  
    if i == 3:  
        break  
    print(i, end=" ")  
  
#III.  
for i in range(6):  
    if i >= 3:  
        continue  
    print(i, end=" ")
```

- A. All of the above.
- B. Only I
- C. I and II
- D. I and III

20. Which statement is true regarding the following code?

```
for char in "hello":  
    print(char)
```

- A. It will print "hello" in a single line.
- B. It will print each character of "hello" on a new line.
- C. It will raise an error.
- D. It will print the number of characters in "hello".

3 Multiple Choice Questions (20 Points) - (LO 3)

Each correct answer: 4 points

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

```
def greet(name):  
    return "Hello, " + name  
  
print(greet("Alice"))
```

- A. Hello, Alice
- B. "Hello, Alice"
- C. greet("Alice")
- D. None

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

```
def calculate_area(length,  
width):  
    return length * width  
  
area1 = calculate_area(5, 3)  
area2 = calculate_area(7, 2)  
area2= 10  
print(area1 + area2)
```

- A. 14
- B. 25
- C. 29
- D. Gives an error.

23. Which of the following best describes the purpose of a flowchart when creating an algorithm?

- A. To provide a detailed list of all variables used in an algorithm

B. To visually represent the steps of an algorithm for better understanding and planning

C. To list all possible errors in an algorithm

D. To calculate the efficiency of an algorithm

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

```
def mystery(a, b):  
    if a > b:  
        return a - b  
    elif a < b:  
        return b - a  
    else:  
        return a + b  
  
print(mystery(5, 3, 2), end=" ")
```

- A. 2
- B. -2
- C. None
- D. Gives an error.

25. Which of the following code examples demonstrates a user-defined function definition?

- A. print("Hello, World")
- B. len("Python")
- C. def greet():
 print("Hello!")
- D. max(10, 20)