Full Name   _____

Section & Subsection   _____

Roll #   _____

1. (1 point) What is the output of the following code?

```python
def f(x, y):
  if x:
    if y:
      print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. xy   B. xyy   C. xyz   D. yz

2. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the **max** function in Python.

3. (1 point) What is the result of [2, 3].append(4)

A. Error   B. []   C. [2, 3, 4]   D. None

4. (1 point) What is the output of the following code?

```python
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. Error   B. 10   C. 9   D. 45

5. (1 point) What is the output of the following code?

```python
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 1   B. 2   C. 5   D. 3

6. (1 point) What is the output of the following code?

```python
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 24   B. 0   C. 720   D. 120

7. (1 point) What is the output of the following code?

```python
x = 20
if x > 3:
    print(">")
print("<")
```

A. ><   B. <<   C. >>   D. <>

8. (1 point) What is the output of the following code?

```python
print(5//2)
```

A. 2.5   B. 3   C. Error   D. 2

9. (1 point) What is the type of 5//2 + 3//2?

A. **list**   B. **str**   C. **int**   D. **float**

10. (1 point) What is the output of the following code?

```python
x = 3
while x < 8:
    x = x + x
print(x)
```

A. 50   B. 6   C. 25   D. 12

11. (1 point) What is the output of the following code?

```python
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 1   B. 2 0   C. 1 1   D. 2 2

12. (1 point) What is the output of the following code?

```python
x = 1
s = 0
while x < 10:
    s = s + x
    x = x + 1
print(s)
```

A. 9   B. 45   C. 0   D. Error

13. (1 point) What is the value of "abcdef"[4]?

A. Error   B. "e"   C. "d"   D. "f"

14. (1 point) What is the output of the following code?

```python
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. Nothing   B. >3   C. >1   D. >1 >3

15. (1 point) What is the output of the following code?

```python
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1   B. Nothing   C. >1 >3   D. >3

16. (1 point) What is the output of the following code?

```python
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 25   B. 10   C. 20   D. 45

17. (1 point) What is the output of the following code?

```python
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 4   B. 1 2 3 4 5   C. 5   D. 1 2 3 4 `Error`

18. (1 point) What is the result of `[2, 3] + [4, 5]`?

    A. `Error`   B. `[2, 3]`   C. `[2, 3, 4, 5]`   D. `[4, 5]`

19. (1 point) What is the type of `5/2 + 3/2`?

    A. `int`   B. `float`   C. `list`   D. `str`

20. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

    A. ><   B. >>   C. <>   D. <<

21. (1 point) What is the value of `"abcdef"[1:5]`?

    A. `Error`   B. `"bcde"`   C. `"abcdef"`   D. `"bcdef"`

22. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
    x = x + x
print(x)
```

    A. 18   B. 9   C. 90   D. `Error`

23. (3 points) Write a program that takes an integer `n` as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

24. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

    A. ><   B. >>   C. <   D. >

25. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

    A. Error   B. barfoo   C. foobar   D. bar

26. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

    A. Error   B. >   C. Nothing   D. <

27. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

    A. baz   B. far   C. foo   D. bar

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1. (1 point) What is the result of `[2, 3].append(4)`

   A. `[2, 3, 4]`   B. `[]`   C. `None`   D. `Error`

2. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

   A. `Error`   B. `9`   C. `45`   D. `10`

3. (1 point) What is the value of `"abcdef"[4]`?

   A. `"f"`   B. `"d"`   C. `"e"`   D. `Error`

4. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    if x % 2 == 0:
        s = s + x
    else:
        s = s + 1
    x = x + 1
print(s)
```

   A. `20`   B. `45`   C. `10`   D. `25`

5. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    s = s + x
    x = x + 1
print(s)
```

   A. `9`   B. `45`   C. `Error`   D. `0`

6. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

   A. `>`   B. `Nothing`   C. `Error`   D. `<`

7. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

   A. `24`   B. `720`   C. `0`   D. `120`

8. (1 point) What is the output of the following code?

```
print(5//2)
```

   A. `2`   B. `3`   C. `Error`   D. `2.5`

9. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
    x = x + x
print(x)
```

   A. `Error`   B. `90`   C. `18`   D. `9`

10. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

   A. `2 1`   B. `2 2`   C. `1 1`   D. `2 0`

11. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

   A. `>>`   B. `<<`   C. `><`   D. `<>`

12. (1 point) What is the type of `5/2 + 3/2`?

   A. `int`   B. `str`   C. `float`   D. `list`

13. (1 point) What is the value of `"abcdef"[1:5]`?

   A. `"abcdef"`   B. `Error`   C. `"bcdef"`   D. `"bcde"`

14. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

   A. `Nothing`   B. `>3`   C. `>1 >3`   D. `>1`

15. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

   A. `><`   B. `<`   C. `>`   D. `>>`

16. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

   A. `bar`   B. `far`   C. `baz`   D. `foo`

17. (3 points) Write a program that takes an integer `n` as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

18. (1 point) What is the result of `[2, 3] + [4, 5]`?

   A. `[4, 5]`   B. `Error`   C. `[2, 3, 4, 5]`   D. `[2, 3]`

19. (2 points) Write a function when given three values `a, b, c` as input, returns the maximum without using the `max` function in Python.

20. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 3   B. 1   C. 5   D. 2

21. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5   B. 1 2 3 4 4   C. 1 2 3 4 5   D. 1 2 3 4 Error

22. (1 point) What is the type of 5//2 + 3//2?

A. str   B. list   C. float   D. int

23. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. ><   B. <>   C. <<   D. >>

24. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
       print("xy")
    elif y:
       print("y")
    else:
       print("z")
print(f(True, True))
```

A. xyy   B. xy   C. yz   D. xyz

25. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 50   B. 12   C. 6   D. 25

26. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. Nothing   B. >1   C. >3   D. >1 >3

27. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. barfoo   B. Error   C. foobar   D. bar

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1. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. bar   B. Error   C. barfoo   D. foobar

2. (1 point) What is the result of [2, 3].append(4)

A. []   B. Error   C. None   D. [2, 3, 4]

3. (1 point) What is the value of "abcdef"[1:5]?

A. Error   B. "bcdef"   C. "bcde"   D. "abcdef"

4. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 1   B. 2 0   C. 1 1   D. 2 2

5. (1 point) What is the type of 5//2 + 3//2?

A. str   B. list   C. int   D. float

6. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 3   B. 2.5   C. Error   D. 2

7. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 720   B. 120   C. 0   D. 24

8. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 2   B. 5   C. 1   D. 3

9. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >3   B. >1   C. >1 >3   D. Nothing

10. (1 point) What is the value of "abcdef"[4]?

A. Error   B. "e"   C. "f"   D. "d"

11. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. <   B. >>   C. ><   D. >

12. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

13. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

A. baz   B. far   C. foo   D. bar

14. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >1 >3   B. Nothing   C. >1   D. >3

15. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. <   B. Error   C. Nothing   D. >

16. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

17. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 50   B. 6   C. 12   D. 25

18. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 Error   B. 5   C. 1 2 3 4 4   D. 1 2 3 4 5

19. (1 point) What is the type of 5/2 + 3/2?

A. str   B. int   C. list   D. float

20. (1 point) What is the result of [2, 3] + [4, 5]?

A. [2, 3]   B. [4, 5]   C. [2, 3, 4, 5]   D. Error

21. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 45   B. 20   C. 25   D. 10

22. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 10   B. 9   C. Error   D. 45

23. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. Error   B. 9   C. 18   D. 90

24. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. 45   B. 9   C. 0   D. Error

25. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. >>   B. ><   C. <>   D. <<

26. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <<   B. <>   C. >>   D. ><

27. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
       print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. xy   B. xyz   C. yz   D. xyy

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Roll # _____

1. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 5 B. 2 C. 1 D. 3

2. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >3 B. Nothing C. >1 >3 D. >1

3. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. >> B. <> C. << D. ><

4. (1 point) What is the value of "abcdef"[4]?

A. "f" B. "d" C. "e" D. Error

5. (1 point) What is the result of [2, 3] + [4, 5]?

A. [2, 3] B. [2, 3, 4, 5] C. [4, 5] D. Error

6. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >< B. >> C. > D. <

7. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
    x = x + x
print(x)
```

A. 90 B. 18 C. 9 D. Error

8. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    if x % 2 == 0:
        s = s + x
    else:
        s = s + 1
    x = x + 1
print(s)
```

9. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

10. (1 point) What is the type of 5//2 + 3//2?

A. list B. float C. str D. int

11. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. foo B. far C. bar D. baz

12. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 1 1 B. 2 2 C. 2 0 D. 2 1

13. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
    x = x + x
print(x)
```

A. 25 B. 6 C. 50 D. 12

14. (1 point) What is the output of the following code?

```
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. xyy B. xyz C. xy D. yz

15. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 0 B. 120 C. 720 D. 24

16. (1 point) What is the type of 5/2 + 3/2?

A. int B. list C. str D. float

17. (1 point) What is the result of [2, 3].append(4)

A. [2, 3, 4] B. None C. [] D. Error

18. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 9   B. 10   C. 45   D. Error

19. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

20. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
   s = s + x
   x = x + 1
print(s)
```

A. 0   B. Error   C. 45   D. 9

21. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <>   B. ><   C. >>   D. <<

22. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Error   B. Nothing   C. <   D. >

23. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. bar   B. foobar   C. Error   D. barfoo

24. (1 point) What is the value of "abcdef"[1:5]?
    A. "bcdef"   B. "abcdef"   C. Error   D. "bcde"

25. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 2.5   B. 2   C. Error   D. 3

26. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5   B. 1 2 3 4 4   C. 1 2 3 4 Error   D. 1 2 3 4 5

27. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3   B. Nothing   C. >1 >3   D. >1

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1. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 2   B. 2 1   C. 1 1   D. 2 0

2. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. Error   B. foobar   C. barfoo   D. bar

3. (1 point) What is the value of "abcdef"[1:5]?

A. "bcde"   B. "abcdef"   C. "bcdef"   D. Error

4. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >   B. <   C. >>   D. ><

5. (1 point) What is the type of 5//2 + 3//2?

A. int   B. list   C. str   D. float

6. (1 point) What is the result of [2, 3] + [4, 5]?

A. [4, 5]   B. [2, 3]   C. Error   D. [2, 3, 4, 5]

7. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 5   B. 1 2 3 4 Error   C. 1 2 3 4 4   D. 5

8. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 0   B. 120   C. 720   D. 24

9. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 20   B. 25   C. 10   D. 45

10. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. >>   B. <>   C. <<   D. ><

11. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3   B. >1 >3   C. Nothing   D. >1

12. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. Error   B. 45   C. 9   D. 0

13. (1 point) What is the result of [2, 3].append(4)

A. None   B. Error   C. [2, 3, 4]   D. []

14. (1 point) What is the type of 5/2 + 3/2?

A. list   B. int   C. float   D. str

15. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

16. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Error   B. <   C. Nothing   D. >

17. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 50   B. 6   C. 25   D. 12

18. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <>   B. ><   C. >>   D. <<

19. (1 point) What is the output of the following code?

```
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. xyy B. yz C. xyz D. xy

20. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. Error B. 9 C. 10 D. 45

21. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 3 B. 1 C. 2 D. 5

22. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. Nothing B. >3 C. >1 D. >1 >3

23. (1 point) What is the output of the following code?

```
print(5//2)
```

A. Error B. 3 C. 2 D. 2.5

24. (1 point) What is the value of `"abcdef"[4]`?

A. "f" B. "d" C. Error D. "e"

25. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
    x = x + x
print(x)
```

A. 18 B. 90 C. 9 D. Error

26. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. bar B. baz C. foo D. far

27. (3 points) Write a program that takes an integer n as input,
and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

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1. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. foo   B. bar   C. baz   D. far

2. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3   B. Nothing   C. >1   D. >1 >3

3. (1 point) What is the type of 5/2 + 3/2?

A. list   B. int   C. str   D. float

4. (1 point) What is the result of [2, 3].append(4)

A. Error   B. None   C. []   D. [2, 3, 4]

5. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. ><   B. >>   C. >   D. <

6. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Error   B. <   C. >   D. Nothing

7. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 0   B. 2 1   C. 1 1   D. 2 2

8. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. bar   B. foobar   C. barfoo   D. Error

9. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    s = s + x
    x = x + 1
print(s)
```

A. 45   B. 9   C. Error   D. 0

10. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 10   B. 9   C. 45   D. Error

11. (1 point) What is the value of "abcdef"[1:5]?

A. "abcdef"   B. "bcde"   C. "bcdef"   D. Error

12. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 720   B. 24   C. 120   D. 0

13. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1 >3   B. Nothing   C. >1   D. >3

14. (1 point) What is the value of "abcdef"[4]?

A. "e"   B. "f"   C. "d"   D. Error

15. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. <<   B. <>   C. ><   D. >>

16. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 2   B. 5   C. 3   D. 1

17. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
    x = x + x
print(x)
```

A. 90   B. 9   C. 18   D. Error

18. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 12 B. 6 C. 50 D. 25

19. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 45 B. 20 C. 25 D. 10

20. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

21. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <> B. >< C. >> D. <<

22. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 4 B. 5 C. 1 2 3 4 5 D. 1 2 3 4 Error

23. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 2.5 B. 3 C. 2 D. Error

24. (1 point) What is the type of 5//2 + 3//2?

A. str B. list C. int D. float

25. (1 point) What is the result of [2, 3] + [4, 5]?

A. [2, 3, 4, 5] B. [4, 5] C. Error D. [2, 3]

26. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

27. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
      print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. xyy B. xy C. xyz D. yz

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1. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 1 1   B. 2 1   C. 2 0   D. 2 2

2. (1 point) What is the result of [2, 3].append(4)
A. [2, 3, 4]   B. Error   C. []   D. None

3. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 20   B. 25   C. 10   D. 45

4. (1 point) What is the value of "abcdef"[4]?
A. "f"   B. "e"   C. Error   D. "d"

5. (1 point) What is the type of 5/2 + 3/2?
A. str   B. float   C. list   D. int

6. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >1 >3   B. Nothing   C. >3   D. >1

7. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Nothing   B. >   C. <   D. Error

8. (1 point) What is the type of 5//2 + 3//2?
A. list   B. str   C. float   D. int

9. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. Nothing   B. >1   C. >3   D. >1 >3

10. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 6   B. 12   C. 50   D. 25

11. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. 45   B. 0   C. Error   D. 9

12. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. foobar   B. bar   C. Error   D. barfoo

13. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 5   B. 3   C. 2   D. 1

14. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. ><   B. >   C. <   D. >>

15. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

16. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. 90   B. 18   C. Error   D. 9

17. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 10   B. 45   C. 9   D. Error

18. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. <>   B. >>   C. ><   D. <<

19. (1 point) What is the value of `"abcdef"[1:5]`?

A. `"abcdef"`   B. `Error`   C. `"bcdef"`   D. `"bcde"`

20. (2 points) Write a function when given three values `a, b, c` as input, returns the maximum without using the `max` function in Python.

21. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 2   B. 2.5   C. `Error`   D. 3

22. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 `Error`   B. 1 2 3 4 5   C. 5   D. 1 2 3 4 4

23. (1 point) What is the result of `[2, 3] + [4, 5]`?

A. `Error`   B. `[4, 5]`   C. `[2, 3]`   D. `[2, 3, 4, 5]`

24. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. ><   B. <<   C. <>   D. >>

25. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 120   B. 24   C. 0   D. 720

26. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. far   B. foo   C. baz   D. bar

27. (1 point) What is the output of the following code?

```
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. xyz   B. xy   C. yz   D. xyy

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1. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

A. `far` B. `baz` C. `bar` D. `foo`

2. (3 points) Write a program that takes an integer `n` as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

3. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. `Error` B. `45` C. `9` D. `0`

4. (1 point) What is the value of `"abcdef"[4]`?

A. `Error` B. `"d"` C. `"f"` D. `"e"`

5. (1 point) What is the output of the following code?

```
print(5//2)
```

A. `Error` B. `2.5` C. `2` D. `3`

6. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. `<` B. `><` C. `>>` D. `>`

7. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. `foobar` B. `bar` C. `barfoo` D. `Error`

8. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. `>>` B. `<<` C. `<>` D. `><`

9. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
      print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. `xy` B. `xyy` C. `yz` D. `xyz`

10. (2 points) Write a function when given three values `a, b, c` as input, returns the maximum without using the `max` function in Python.

11. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. `>1` B. `Nothing` C. `>1 >3` D. `>3`

12. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. `12` B. `6` C. `50` D. `25`

13. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. `18` B. `Error` C. `9` D. `90`

14. (1 point) What is the type of `5//2 + 3//2`?

A. `str` B. `float` C. `list` D. `int`

15. (1 point) What is the type of `5/2 + 3/2`?

A. `list` B. `float` C. `str` D. `int`

16. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. `20` B. `10` C. `25` D. `45`

17. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. < B. > C. Error D. Nothing

18. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3 B. Nothing C. >1 D. >1 >3

19. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 1 B. 2 0 C. 1 1 D. 2 2

20. (1 point) What is the result of `[2, 3].append(4)`

A. [2, 3, 4] B. None C. Error D. []

21. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. Error B. 9 C. 45 D. 10

22. (1 point) What is the value of `"abcdef"[1:5]`?

A. "bcdef" B. "abcdef" C. "bcde" D. Error

23. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. >> B. >< C. <> D. <<

24. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5 B. 1 2 3 4 5 C. 1 2 3 4 4 D. 1 2 3 4 Error

25. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 2 B. 1 C. 5 D. 3

26. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 0 B. 120 C. 24 D. 720

27. (1 point) What is the result of `[2, 3] + [4, 5]`?

A. [4, 5] B. [2, 3] C. [2, 3, 4, 5] D. Error

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1. (1 point) What is the output of the following code?

```python
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. bar   B. baz   C. foo   D. far

2. (1 point) What is the output of the following code?

```python
x = 1
s = 0
while x < 10:
    if x % 2 == 0:
        s = s + x
    else:
        s = s + 1
    x = x + 1
print(s)
```

A. 10   B. 25   C. 45   D. 20

3. (1 point) What is the output of the following code?

```python
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <>   B. ><   C. <<   D. >>

4. (1 point) What is the output of the following code?

```python
x = 3
for x in range(10):
    x = x + x
print(x)
```

A. Error   B. 90   C. 18   D. 9

5. (1 point) What is the value of "abcdef"[4]?

A. Error   B. "f"   C. "e"   D. "d"

6. (1 point) What is the output of the following code?

```python
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 3   B. 5   C. 2   D. 1

7. (1 point) What is the output of the following code?

```python
x = 20
if x > 3:
    print(">")
print("<")
```

A. >>   B. <>   C. ><   D. <<

8. (1 point) What is the output of the following code?

```python
x = 3
while x < 8:
    x = x + x
print(x)
```

A. 25   B. 12   C. 6   D. 50

9. (1 point) What is the type of 5//2 + 3//2?

A. str   B. int   C. list   D. float

10. (1 point) What is the value of "abcdef"[1:5]?

A. "bcdef"   B. Error   C. "bcde"   D. "abcdef"

11. (1 point) What is the output of the following code?

```python
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1   B. Nothing   C. >3   D. >1 >3

12. (1 point) What is the output of the following code?

```python
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 0   B. 24   C. 120   D. 720

13. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

14. (1 point) What is the output of the following code?

```python
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. yz   B. xyy   C. xy   D. xyz

15. (1 point) What is the result of [2, 3].append(4)

A. None   B. Error   C. []   D. [2, 3, 4]

16. (1 point) What is the output of the following code?

```python
print(5//2)
```

A. 2   B. 2.5   C. Error   D. 3

17. (1 point) What is the output of the following code?

```python
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5   B. 1 2 3 4 4   C. 1 2 3 4 5   D. 1 2 3 4 Error

18. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

19. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3   B. >1 >3   C. Nothing   D. >1

20. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. foobar   B. Error   C. bar   D. barfoo

21. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >>   B. <   C. >   D. ><

22. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 9   B. Error   C. 45   D. 10

23. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 2   B. 2 0   C. 2 1   D. 1 1

24. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. 45   B. 9   C. 0   D. Error

25. (1 point) What is the type of 5/2 + 3/2?
    A. int   B. list   C. float   D. str

26. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Nothing   B. >   C. <   D. Error

27. (1 point) What is the result of [2, 3] + [4, 5]?
    A. [2, 3, 4, 5]   B. Error   C. [4, 5]   D. [2, 3]

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Roll #   _____

1. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. Nothing   B. >3   C. >1   D. >1 >3

2. (1 point) What is the result of `[2, 3].append(4)`

A. `[2, 3, 4]`   B. `[]`   C. `Error`   D. `None`

3. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 1 1   B. 2 0   C. 2 2   D. 2 1

4. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
      print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. yz   B. xy   C. xyy   D. xyz

5. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 6   B. 12   C. 50   D. 25

6. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 24   B. 720   C. 120   D. 0

7. (2 points) Write a function when given three values `a, b, c` as input, returns the maximum without using the `max` function in Python.

8. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5   B. 1 2 3 4 4   C. 1 2 3 4 Error   D. 1 2 3 4 5

9. (1 point) What is the output of the following code?

```
print(5//2)
```

A. Error   B. 3   C. 2.5   D. 2

10. (1 point) What is the value of `"abcdef"[4]`?

A. "f"   B. Error   C. "e"   D. "d"

11. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

A. baz   B. bar   C. foo   D. far

12. (1 point) What is the type of 5/2 + 3/2?

A. `int`   B. `float`   C. `str`   D. `list`

13. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. ><   B. <   C. >>   D. >

14. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. Error   B. bar   C. barfoo   D. foobar

15. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 2   B. 1   C. 3   D. 5

16. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. <   B. Error   C. Nothing   D. >

17. (1 point) What is the type of 5//2 + 3//2?

A. `str`   B. `list`   C. `float`   D. `int`

18. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. <<   B. >>   C. ><   D. <>

19. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. 18   B. 90   C. Error   D. 9

20. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. 45   B. Error   C. 0   D. 9

21. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1   B. >3   C. Nothing   D. >1 >3

22. (1 point) What is the result of [2, 3] + [4, 5]?

A. [2, 3, 4, 5]   B. Error   C. [2, 3]   D. [4, 5]

23. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 10   B. 45   C. 20   D. 25

24. (3 points) Write a program that takes an integer **n** as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

25. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 10   B. 9   C. 45   D. Error

26. (1 point) What is the value of `"abcdef"[1:5]`?

A. "bcdef"   B. "bcde"   C. Error   D. "abcdef"

27. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. ><   B. >>   C. <>   D. <<

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1. (1 point) What is the result of [2, 3] + [4, 5]?

    A. [2, 3]   B. Error   C. [2, 3, 4, 5]   D. [4, 5]

2. (1 point) What is the type of 5/2 + 3/2?

    A. **float**   B. **list**   C. **int**   D. **str**

3. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

    A. 2 1   B. 2 2   C. 2 0   D. 1 1

4. (1 point) What is the value of "abcdef"[1:5]?

    A. Error   B. "bcdef"   C. "bcde"   D. "abcdef"

5. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

    A. far   B. baz   C. foo   D. bar

6. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

    A. >   B. Nothing   C. Error   D. <

7. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

    A. 3   B. 2   C. 1   D. 5

8. (1 point) What is the type of 5//2 + 3//2?

    A. **int**   B. **float**   C. **str**   D. **list**

9. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

    A. >3   B. >1 >3   C. Nothing   D. >1

10. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

    A. 1 2 3 4 5   B. 1 2 3 4 4   C. 5   D. 1 2 3 4 Error

11. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

    A. Error   B. barfoo   C. bar   D. foobar

12. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

    A. 6   B. 12   C. 25   D. 50

13. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

    A. 45   B. 10   C. Error   D. 9

14. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

    A. >>   B. ><   C. <>   D. <<

15. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the **max** function in Python.

16. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

    A. 9   B. 18   C. 90   D. Error

17. (1 point) What is the result of [2, 3].append(4)

    A. None   B. [2, 3, 4]   C. []   D. Error

18. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

    A. 9   B. 0   C. 45   D. Error

19. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >   B. >>   C. ><   D. <

20. (1 point) What is the output of the following code?

```
print(5//2)
```

A. Error   B. 3   C. 2.5   D. 2

21. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 0   B. 720   C. 24   D. 120

22. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    if x % 2 == 0:
        s = s + x
    else:
        s = s + 1
    x = x + 1
print(s)
```

A. 10   B. 20   C. 25   D. 45

23. (1 point) What is the output of the following code?

```
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. yz   B. xyz   C. xyy   D. xy

24. (1 point) What is the value of `"abcdef"[4]`?

A. "d"   B. Error   C. "e"   D. "f"

25. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. Nothing   B. >1   C. >3   D. >1 >3

26. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. ><   B. >>   C. <<   D. <>

27. (3 points) Write a program that takes an integer **n** as input,
and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

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1. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1 >3   B. >3   C. Nothing   D. >1

2. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 2.5   B. 3   C. Error   D. 2

3. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. ><   B. >   C. <   D. >>

4. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. foobar   B. Error   C. barfoo   D. bar

5. (1 point) What is the result of [2, 3] + [4, 5]?

A. [2, 3, 4, 5]   B. [2, 3]   C. [4, 5]   D. Error

6. (1 point) What is the value of "abcdef"[4]?

A. "d"   B. "f"   C. Error   D. "e"

7. (1 point) What is the output of the following code?

```
def f(x, y):
    if x:
        if y:
            print("xy")
        elif y:
            print("y")
        else:
            print("z")
print(f(True, True))
```

A. xyz   B. xyy   C. yz   D. xy

8. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
    x = x + x
print(x)
```

A. 6   B. 12   C. 25   D. 50

9. (1 point) What is the result of [2, 3].append(4)

A. []   B. [2, 3, 4]   C. None   D. Error

10. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
    s = s + x
    x = x + 1
print(s)
```

A. 9   B. 0   C. 45   D. Error

11. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 24   B. 0   C. 720   D. 120

12. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

13. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 4   B. 1 2 3 4 5   C. 1 2 3 4 Error   D. 5

14. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
    y = "baz"
else:
    y = "far"
print(y)
```

A. foo   B. far   C. baz   D. bar

15. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 2   B. 5   C. 3   D. 1

16. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the max function in Python.

17. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. Error   B. Nothing   C. >   D. <

18. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >3 B. >1 >3 C. Nothing D. >1

19. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 10 B. 20 C. 45 D. 25

20. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. 9 B. 18 C. Error D. 90

21. (1 point) What is the value of `"abcdef"[1:5]`?

A. "abcdef" B. "bcde" C. "bcdef" D. Error

22. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 1 B. 2 0 C. 2 2 D. 1 1

23. (1 point) What is the type of `5/2 + 3/2`?

A. float B. list C. int D. str

24. (1 point) What is the type of `5//2 + 3//2`?

A. int B. list C. float D. str

25. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. Error B. 9 C. 45 D. 10

26. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. >> B. << C. >< D. <>

27. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. << B. >> C. >< D. <>

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1. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 5   B. 1 2 3 4 5   C. 1 2 3 4 4   D. 1 2 3 4 Error

2. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

A. Error   B. 45   C. 0   D. 9

3. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the **max** function in Python.

4. (1 point) What is the value of "abcdef"[4]?

A. Error   B. "f"   C. "d"   D. "e"

5. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. Error   B. foobar   C. barfoo   D. bar

6. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. <   B. >   C. Nothing   D. Error

7. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

A. 9   B. 10   C. Error   D. 45

8. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >>   B. >   C. ><   D. <

9. (1 point) What is the value of "abcdef"[1:5]?

A. "abcdef"   B. Error   C. "bcdef"   D. "bcde"

10. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

A. 9   B. 18   C. 90   D. Error

11. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

A. <>   B. ><   C. <<   D. >>

12. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

A. >1 >3   B. Nothing   C. >3   D. >1

13. (1 point) What is the type of 5//2 + 3//2?

A. **int**   B. **float**   C. **str**   D. **list**

14. (1 point) What is the type of 5/2 + 3/2?

A. **list**   B. **int**   C. **str**   D. **float**

15. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

A. 2 0   B. 2 2   C. 2 1   D. 1 1

16. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

A. <>   B. >>   C. ><   D. <<

17. (3 points) Write a program that takes an integer n as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

18. (1 point) What is the result of [2, 3].append(4)

A. Error   B. []   C. [2, 3, 4]   D. None

19. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 45   B. 20   C. 10   D. 25

20. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

A. 120   B. 720   C. 0   D. 24

21. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 1   B. 3   C. 5   D. 2

22. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

A. >1 >3   B. >3   C. Nothing   D. >1

23. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 12   B. 6   C. 50   D. 25

24. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 3   B. 2.5   C. 2   D. Error

25. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
      print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

A. xyz   B. yz   C. xy   D. xyy

26. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

A. foo   B. bar   C. far   D. baz

27. (1 point) What is the result of [2, 3] + [4, 5]?
    A. Error   B. [4, 5]   C. [2, 3, 4, 5]   D. [2, 3]

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1. (1 point) What is the type of 5//2 + 3//2?

   A. **str** B. **int** C. **list** D. **float**

2. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
if x > 3:
    print(">3")
```

   A. Nothing B. >1 >3 C. >3 D. >1

3. (1 point) What is the result of [2, 3].append(4)

   A. None B. [] C. Error D. [2, 3, 4]

4. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
if x > 0:
    print("<")
```

   A. >> B. >< C. << D. <>

5. (1 point) What is the output of the following code?

```
s = 0
for x in range(10):
    s = s + x
print(s)
```

   A. 9 B. 45 C. Error D. 10

6. (1 point) What is the output of the following code?

```
def f(x, y):
  if x:
    if y:
        print("xy")
    elif y:
      print("y")
    else:
      print("z")
print(f(True, True))
```

   A. yz B. xyz C. xy D. xyy

7. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">1")
    x = 4
elif x > 3:
    print(">3")
```

   A. >3 B. Nothing C. >1 D. >1 >3

8. (2 points) Write a function when given three values a, b, c as input, returns the maximum without using the **max** function in Python.

9. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
print("<")
```

   A. << B. >< C. <> D. >>

10. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  s = s + x
  x = x + 1
print(s)
```

   A. Error B. 45 C. 0 D. 9

11. (1 point) What is the output of the following code?

```
x = 1
y = x - 1
x = x + 1
print(x, y)
```

   A. 2 1 B. 2 0 C. 1 1 D. 2 2

12. (1 point) What is the result of [2, 3] + [4, 5]?

   A. [2, 3] B. Error C. [4, 5] D. [2, 3, 4, 5]

13. (3 points) Write a program that takes an integer **n** as input, and prints the result of the summation: $\sum_{i=1}^{n} i^4$.

14. (1 point) What is the output of the following code?

```
x = 3
for x in range(10):
  x = x + x
print(x)
```

   A. 90 B. 18 C. Error D. 9

15. (1 point) What is the output of the following code?

```
factorial_of_5 = 1
for x in range(5):
    factorial_of_5 = factorial_of_5 * x
print(factorial_of_5)
```

   A. 720 B. 120 C. 0 D. 24

16. (1 point) What is the value of "abcdef"[1:5]?

   A. "bcde" B. "bcdef" C. Error D. "abcdef"

17. (1 point) What is the output of the following code?

```
x = "foo"
if x < "bar":
  y = "baz"
else:
  y = "far"
print(y)
```

   A. baz B. far C. bar D. foo

18. (1 point) What is the output of the following code?

```
x = 2
if x > 1:
    print(">")
elif x > 0:
    print("<")
```

A. >   B. ><   C. <   D. >>

19. (1 point) What is the output of the following code?

```
x = 20
if x > 3:
    print(">")
else:
    print("<")
```

A. <   B. Error   C. >   D. Nothing

20. (1 point) What is the output of the following code?

```
print(5//2)
```

A. 2.5   B. 3   C. 2   D. Error

21. (1 point) What is the output of the following code?

```
x = 3
while x < 8:
  x = x + x
print(x)
```

A. 50   B. 12   C. 6   D. 25

22. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    break
    x = x + 1
print(x)
```

A. 1   B. 2   C. 5   D. 3

23. (1 point) What is the output of the following code?

```
x = 1
while x < 5:
    print(x)
    x = x + 1
print(x)
```

A. 1 2 3 4 5   B. 1 2 3 4 4   C. 1 2 3 4 Error   D. 5

24. (1 point) What is the output of the following code?

```
x = "foo"
x = x + "bar"
print(x)
```

A. barfoo   B. foobar   C. bar   D. Error

25. (1 point) What is the type of 5/2 + 3/2?

A. list   B. str   C. float   D. int

26. (1 point) What is the value of "abcdef"[4]?

A. Error   B. "e"   C. "f"   D. "d"

27. (1 point) What is the output of the following code?

```
x = 1
s = 0
while x < 10:
  if x % 2 == 0:
    s = s + x
  else:
    s = s + 1
  x = x + 1
print(s)
```

A. 45   B. 10   C. 20   D. 25