1. True or False: The length of a list is given by the length() function.

2. True or False: The index for the first element of a list is 1, e.g., xlist[1] is the first element of the list xlist.

3. What is the output produced by the following code?

**xlist = []**

**xlist.append(5)**

**xlist.append(10)**

**print(xlist)**

(a) [5, 10]

(b) []

(c) 5, 10

(d) 5 10

(e) This produces an error.

(f) None of the above.

4. What is the output produced by the following code?

**zlist = []**

**zlist.append([3, 4])**

**print(zlist)**

(a) [3, 4]

(b) [[3, 4]]

(c) 3, 4

(d) 3 4

(e) None of the above.

5. What is the value of xlist2 after the following statement has been executed?

**xlist2 = list(range(-3, 3))**

(a) [-3, -2, -1, 0, 1, 2, 3]

(b) [-3, -2, -1, 0, 1, 2]

(c) [-2, -1, 0, 1, 2]

(d) [-3, 0, 3]

(e) This produces an error.

6. What is the value of xlist3 after the following statement has been executed?

**xlist3 = list(range(-3, 3, 3))**

(a) [-3, 0, 3]

(b) [-3, 0]

(c) [-2, 1]

(d) This produces an error.

7. What is the value of xlist4 after the following statement has been executed?

**xlist4 = list(range(-3))**

(a) []

(b) [-3, -2, -1]

(c) [-3, -2, -1, 0]

(d) This produces an error.

8. What is output produced by the following?

**xlist = [2, 1, 3]**

**ylist = xlist.sort()**

**print(xlist, ylist)**

(a) [2, 1, 3] [1, 2, 3]

(b) [3, 2, 1] [3, 2, 1]

(c) [1, 2, 3] [2, 1, 3]

(d) [1, 2, 3] None

(e) This produces an error.

9. To what value is the variable x set by the following code?

**def multiply\_list(start, stop):**

**product = 1**

**for element in range(start, stop):**

**product = product \* element**

**return product**

**x = multiply\_list(1, 4)**

(a) 24

(b) 6

(c) 2

(d) 1

10. Consider the following function:

**def f1(x, y):**

**print([x, y])**

True or False: This function returns a list consisting of the two parameters passed to the

function.

11. Consider the following function:

**def f2(x, y):**

**return x, y**

True or False: This function returns a list consisting of the two parameters passed to the

function.

12. Consider the following function:

**def f3(x, y):**

**print(x, y)**

**return [x, y]**

True or False: This function returns a list consisting of the two parameters passed to the

function.

13. Consider the following function:

**def f4(x, y):**

**return [x, y]**

**print(x, y)**

True or False: This function prints a list consisting of the two parameters passed to the

function.

14. Consider the following function:

**def f5(x, y):**

**return [x, y]**

**print([x, y])**

True or False: This function prints a list consisting of the two parameters passed to the

function.

15. What output is produced by the following code?

**xlist = [3, 2, 1, 0]**

**for item in xlist:**

**print(item, end=" ")**

(a) 3210

(b) 3 2 1 0

(c) [3, 2, 1, 0]

(d) This produces an error.

(e) None of the above.

16. What output is produced by the following code?

**a = 1**

**b = 2**

**xlist = [a, b, a + b]**

**a = 0**

**b = 0**

**print(xlist)**

(a) [a, b, a b]+

(b) [1, 2, 3]

(c) [0, 0, 0]

(d) This produces an error.

(e) None of the above.

17. What output is produced by the following code?

**xlist = [3, 5, 7]**

**print(xlist[1] + xlist[3])**

(a) 10

(b) 12

(c) 4

(d) This produces an error.

(e) None of the above.

18. What output is produced by the following code?

**xlist = ["aa", "bb", "cc"]**

**for i in [2, 1, 0]:**

**print(xlist[i], end=" ")**

(a) aa bb cc

(b) cc bb aa

(c) This produces an error.

(d) None of the above.

19. What does the following code do?

**for i in range(1, 10, 2):**

**print(i)**

(a) Prints all odd numbers in the range [1, 9].

(b) Prints all numbers in the range [1, 9].

(c) Prints all even numbers in the range [1, 10].

(d) This produces an error.

20. What is the result of evaluating the expression list(range(5))?

(a) [0, 1, 2, 3, 4]

(b) [1, 2, 3, 4, 5]

(c) [0, 1, 2, 3, 4, 5]

(d) None of the above.

21. Which of the following headers is appropriate for implementing a counted loop that executes

4 times?

(a) for i in 4:

(b) for i in range(5):

(c) for i in range(4):

(d) for i in range(1, 4):

22. Consider the following program:

**def main():**

**num = eval(input("Enter a number: "))**

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

**num = num \* 2**

**print(num)**

**main()**

Suppose the input to this program is 2, what is the output?

(a) **2**

**4**

**8**

(b) **4**

**8**

(c) **4**

**8**

**16**

(d) **16**

23. The following fragment of code is in a program. What output does it produce?

**fact = 1**

**for factor in range(4):**

**fact = fact \* factor**

**print(fact)**

(a) 120

(b) 24

(c) 6

(d) 0

24. What is the output from the following program if the user enters 5.

**def main():**

**n = eval(input("Enter an integer: "))**

**ans = 0**

**for x in range(1, n):**

**ans = ans + x**

**print(ans)**

**main()**

(a) 120

(b) 10

(c) 15

(d) None of the above.

25. What is the output from the following code?

**s = [’s’, ’c’, ’o’, ’r’, ’e’]**

**for i in range(len(s) - 1, -1, -1):**

**print(s[i], end = " ")**

(a) s c o r e

(b) e r o c s

(c) 4 3 2 1 0

(d) None of the above.

26. The following fragment of code is in a program. What output does it produce?

**s = [’s’, ’c’, ’o’, ’r’, ’e’]**

**sum = 0**

**for i in range(len(s)):**

**sum = sum + s[i]**

**print(sum)**

(a) score

(b) erocs

(c) scor

(d) 01234

(e) None of the above.

27. The following fragment of code is in a program. What output does it produce?

**s = [’s’, ’c’, ’o’, ’r’, ’e’]**

**sum = ""**

**for i in range(len(s)):**

**sum = s[i] + sum**

**print(sum)**

(a) score

(b) erocs

(c) scor

(d) 01234

(e) None of the above.

28. What is the value returned by the following function when it is called with an argument of 3

(i.e., summer1(3))?

**def summer1(n):**

**sum = 0**

**for i in range(1, n + 1):**

**sum = sum + i**

**return sum**

(a) 3

(b) 1

(c) 6

(d) 0

29. What is the value returned by the following function when it is called with an argument of 4

(i.e., summer2(4))?

**def summer2(n):**

**sum = 0**

**for i in range(n):**

**sum = sum + i**

**return sum**

(a) 3

(b) 1

(c) 6

(d) 0

30. Consider the following function:

**def foo():**

**xlist = []**

**for i in range(4):**

**x = input("Enter a number: ")**

**xlist.append(x)**

**return xlist**

Which of the following best describes what this function does?

(a) It returns a list of four numbers that the user provides.

(b) It returns a list of four strings that the user provides.

(c) It returns a list of three numbers that the user provides.

(d) It produces an error.