KAUST TEST BANK

ملاحظة:

"اغلب الاجابات خاطئة🙂"
حلوها بنفسكم

دعواتكم

by ice :

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From a population with mean $\mu = 100$ and standard deviation $\sigma = 20$, a sample of 16 is taken. According to the Central Limit Theorem, the expected mean and standard deviation of the sample mean are:

- (●) a) $\mu = 100, \sigma = 20$
- ( ) b) $\mu = 100, \sigma = 5$
- ( ) c) $\mu = 100, \sigma = 10$
- ( ) d) $\mu = 100, \sigma = 2.5$
- ( ) e) None of the above

Clear selection

If the population mean is 50 and the sample mean is 48 with a sample size of 64, what is the standard error of the sample mean, given that the population standard deviation is 8?

- (●) a) 1
- ( ) b) 0.5
- ( ) c) 0.25
- ( ) d) 2
- ( ) e) 1.5

Clear selection

A random sample of size 25 is drawn from a population with a mean of 50 and a standard deviation of 10. If the sample mean is 52, what is the z-score of the sample mean?

- a) 0.5
- b) 1
- c) 1.5
- d) 2
- e) 2.5

Clear selection

6. The derivative of the function f given by $f(x) = \sin(2x^2 - 14)$ is:

a) $f'(x) = \cos(4x)$.

b) $f'(x) = 4x \sin(2x^2 - 14)$.

c) $f'(x) = -4x \cos(2x^2 - 14)$.

d) $f'(x) = -\cos(4x)$.

e) None of the answers.

- ○ A
- ○ B
- ○ C
- ○ D
- ◉ E

The gradient of the function f given by $f(x,y) = -x^2\sqrt{y}$ at the point $(-1,3)$ is

a) $\begin{bmatrix} 2\sqrt{3} \\ -\frac{1}{2\sqrt{3}} \end{bmatrix}$.

b) $\begin{bmatrix} 2\sqrt{3} \\ -\frac{1}{\sqrt{3}} \end{bmatrix}$.

c) $\begin{bmatrix} -2\sqrt{3} \\ -\frac{1}{2\sqrt{3}} \end{bmatrix}$.

d) $\begin{bmatrix} -2\sqrt{3} \\ -\frac{1}{\sqrt{3}} \end{bmatrix}$.

e) None of the above.

○ A

◉ B

○ C

○ D

○ E

The derivative, f', of a function f is given by $f'(x) = x^2 - 1$ for $x \in \mathbb{R}$. What must be true about f?

a) f attains a minimum value at $x = -1$.

b) f attains a maximum value at $x = -1$.

c) f attains a minimum value at $x = 0$.

d) f attains a maximum value at $x = 0$.

e) None of the above.

- ○ A
- ○ B
- ○ C
- ○ D
- ◉ E

Clear selection

The derivative, f', of a function f is negative everywhere. We know also that $f(0) = 0$. What must be true about $f(-1)$?

a) $f(-1)$ is negative.

b) $f(-1)$ is positive.

c) $f(-1)$ is zero.

d) Not enough information to conclude anything about $f(-1)$.

e) None of the above.

- ○ A
- ◉ B
- ○ C
- ○ D
- ○ E

The equation of the tangent line to the graph of the function f given by $f(x) = \sqrt{x} - x^2$ at $x = 4$ is

a) $y + 14 = -\frac{31}{4}(x - 4)$.

b) $y + 14 = -\frac{7}{4}(x - 4)$.

c) $y - 14 = -\frac{31}{4}(x - 4)$.

d) $y - 14 = -\frac{7}{4}(x - 4)$.

e) None of the above.

○ A

◉ B

○ C

○ D

○ E

Clear selection

1. We write $\begin{bmatrix} 4 \\ 2 \end{bmatrix}$ as a linear combination of $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$ and $\begin{bmatrix} 1 \\ 2 \end{bmatrix}$. The coefficients of the linear combination are:

   a) 2 and 3

   b) -1 and 1

   c) 6 and -2

   d) 3 and 0

   e) none of the answers

- ○ A
- ○ B
- ○ C
- ◉ D
- ○ E

Clear selection

The derivative of the function f given by $f(x) = -4x^4 + \cos(x)$ is

a) $f'(x) = -4x^3 + \sin(x)$.

b) $f'(x) = -4x^3 - \sin(x)$.

c) $f'(x) = -16x^3 - \sin(x)$.

d) $f'(x) = -16x^3 + \sin(x)$.

e) None of the above.

- ○ A
- ○ B
- ◉ C
- ○ D
- ○ E

Clear selection

3. Let $x = \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}$ and $b = \begin{bmatrix} -x_1 + x_2 \\ -x_2 + x_3 \end{bmatrix}$, then the matrix A that gives $Ax = b$ is:

a) $A = \begin{bmatrix} 1 & -1 & 0 \\ 0 & 1 & -1 \end{bmatrix}$

b) $A = \begin{bmatrix} 0 & -1 & 1 \\ -1 & 1 & 0 \end{bmatrix}$

c) $A = \begin{bmatrix} -1 & 1 & 0 \\ 0 & -1 & 1 \end{bmatrix}$

d) $A = \begin{bmatrix} 0 & 1 & -1 \\ 1 & -1 & 0 \end{bmatrix}$

e) None of the answers

- ○ A
- ○ B
- ◉ C
- ○ D
- ○ E

Clear selection

5. Let $A = \begin{bmatrix} 2 & 1 \\ 1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & x \\ x & 1 \end{bmatrix}$. The value of x that makes $AB = BA$ is:

a) $x = 3$

b) $x = 2$

c) $x = 1$

d) $x = 0$

e) None of the answers

○ A

○ B

○ C

○ D

◉ E

Clear selection

The following systems of equations will only have one solution which is the zero solution when:

$$\begin{cases} x + 2y + 3z + 4w &= 0 \\ 5z + 6w &= 0 \\ az + 6w &= 0 \\ y + 7z + 8w &= 0 \end{cases}$$

a) $a = 0$

b) $a = 5$

c) $a \neq 5$

d) $a \neq 0$

e) None of the answers.

○ A

○ B

◉ C

○ D

○ E

Clear selection

The value of λ for which $u = \begin{bmatrix} 3 \\ -2 \\ 1 \end{bmatrix}$ and $v = \begin{bmatrix} 4 \\ 3 \\ -\lambda \end{bmatrix}$ are orthogonal (perpendicular is:

a) 12
b) -6
c) 6
d) -12
e) none of the answers

- ○ A
- ○ B
- ◉ C
- ○ D
- ○ E

Clear selection

What does the covariance of a dataset measure?

- a) The average value of the dataset
- b) The spread of the data points
- c) The relationship between two variables
- d) The distribution of data points

Clear selection

If we perform the Gaussian Elimination on $A = \begin{bmatrix} 1 & -6 & -4 \\ 2 & -10 & -9 \\ -1 & 6 & 5 \end{bmatrix}$, we get

a) $U = \begin{bmatrix} 1 & -6 & -4 \\ 0 & 2 & -1 \\ 0 & 0 & 1 \end{bmatrix}$

b) $U = \begin{bmatrix} 1 & -6 & -4 \\ 0 & 1 & -2 \\ 0 & 0 & 1 \end{bmatrix}$

c) $U = \begin{bmatrix} 1 & -6 & -4 \\ 0 & 1 & -2 \\ 0 & 0 & 2 \end{bmatrix}$

d) $U = \begin{bmatrix} 1 & -6 & -4 \\ 0 & 2 & -1 \\ 0 & 0 & 2 \end{bmatrix}$

e) none of the answers

- ○ A
- ○ B
- ○ C
- ◉ D
- ○ E

Clear selection

What is the primary purpose of the Central Limit Theorem?

- a) To show that the sample mean approaches the population mean as the sample size increases
- b) To show that the distribution of the sample mean approaches a normal distribution as the sample size increases
- c) To show that the sample variance approaches the population variance as the sample size increases
- d) To show that the sample proportion approaches the population proportion as the sample size increases

Clear selection

What is the primary purpose of a two-sample t-test?

- a) To determine if there is a significant difference between the means of two independent samples
- b) To determine if there is a significant difference between the means of two related samples
- c) To determine if there is a significant difference between the variances of two samples
- d) To determine if there is a significant difference between the proportions of two samples

Clear selection

The sum of the probabilities of all possible outcomes in an experiment is:

- ○ a) 0
- ◉ b) 1
- ○ c) 2
- ○ d) Depends on the experiment

Clear selection

What is the purpose of row echelon form in solving systems of linear equations?

- ☑ a) To make the system easier to solve
- ☑ b) To determine the rank of the matrix
- ☐ c) To find the determinant of the matrix

How does matrix multiplication differ from multiplying a matrix by a vector?

- [x] a) The result of matrix multiplication is a matrix
- [x] b) The result of multiplying a matrix by a vector is a vector
- [x] c) The order in which the multiplication is carried out matters

What is the purpose of the sigmoid function in classification with perceptrons?

- [x] a) To transform the output into a probability
- [x] b) To transform the output into a binary class
- [ ] c) To transform the input into a linear combination

What is the difference between shallow and deep copies in Python?

- [x] a) Shallow copies create a new object, but do not copy the elements within the object, while deep copies copy the object and the elements within it.
- [ ] b) Shallow copies create a new object and copy the elements within the object, while deep copies do not copy the elements within the object.
- [ ] c) Shallow copies and deep copies are the same.
- [ ] d) There is no difference between shallow and deep copies.

Clear selection

What is the purpose of the map function in Python?

- (●) a) To apply a given function to each item of an iterable and return a list of the results.
- ( ) b) To filter elements of an iterable based on a function.
- ( ) c) To create a new list based on an existing list.
- ( ) d) To iterate over two or more iterables in parallel.

Clear selection

What does the derivative of a function at a point represent?

- (●) a) The slope of the tangent line at that point
- ( ) b) The area under the curve at that point
- ( ) c) The total distance covered by the function
- ( ) d) The average value of the function

Clear selection

Which of the following is true about maxima and minima?

- [x] a) They are points where the function is at its highest or lowest respectively.
- [x] b) They can be found by setting the derivative of the function equal to zero.
- [ ] c) They are points where the tangent line to the function is horizontal.

Which of the following is a method used to optimize the squared loss in machine learning problems?

- [x] a) Taking the derivative of the cost function
- [x] b) Setting the derivative equal to zero and solving for the variable
- [x] c) Checking the second derivative to determine if it's a maximum or minimum

What is a partial derivative?

- (•) a) A derivative with respect to one variable while keeping the other variables constant
- ( ) b) A derivative of a function with no variables
- ( ) c) A derivative that is partially calculated
- ( ) d) A derivative of a function with multiple variables, considering all variables at once

Which of the following is a use of gradient descent in machine learning?

- [x] a) To find the line of best fit in a linear regression problem
- [ ] b) To optimize the weights of a neural network
- [ ] c) To find the maximum likelihood estimate of a parameter

Which of the following is true about gradients in the context of optimization?

- [ ] a) Gradients always point in the direction of the maximum increase of the function
- [ ] b) Gradients always point in the direction of the minimum increase of the function
- [ ] c) Gradients have nothing to do with optimization
- [ ] d) Gradients are not used in optimization

What does a saddle point represent in the context of multivariable functions?

- a) A point where the function has a maximum value
- b) A point where the function has a minimum value
- c) A point where the function has neither a maximum nor a minimum value
- d) A point where the function is not defined

Clear selection

In the context of neural networks, what role does the loss function play?

- a) Determines the architecture of the network
- b) Defines how well the model's predictions match the actual data
- c) Influences the learning rate of the model
- d) Specifies the activation functions used in the network

Clear selection

What does the sigmoid function primarily transform its input into?

- a) A value between -1 and 1
- b) A value between 0 and infinity
- c) A value between 0 and 1
- d) A value between -infinity and infinity

Clear selection

Which of the following is a use of gradient descent in machine learning?

- [x] a) To find the line of best fit in a linear regression problem
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- ( ) b) A value between 0 and infinity
- (•) c) A value between 0 and 1
- ( ) d) A value between -infinity and infinity

What do second derivatives primarily provide insight into regarding a function?

- ○ a) The rate of change of the function
- ◉ b) The curvature or concavity of the function
- ○ c) The intersections of the function with the x-axis
- ○ d) The maximum value of the function

Clear selection

Which of the following is a key component of backpropagation in neural networks?

- ○ a) Randomly initializing weights
- ○ b) Calculating the gradient of the loss function with respect to each weight
- ◉ c) Setting the learning rate to a fixed value
- ○ d) Assigning equal importance to all

What's the primary use of the gradient descent algorithm in training neural networks?

- ○ a) To define the network architecture
- ○ b) To randomly initialize weights
- ◉ c) To iteratively adjust weights to minimize the loss function
- ○ d) To classify input data into distinct classes

Clear selection

17. What will be the output of the Python code:

```
x = 5
if x%2 ==0:
    print("True")

else:
    print("False")
```

- ○ True
- ◉ False
- ○ 5
- ○ 2
- ○ None of the above

18. What will be the next number in the sequence:
1, 1, 2, 3, 5, 8,

- ○ 6, 12
- ○ 10,13
- ◉ 13, 21
- ○ 21, 32
- ○ None of the above

19. What will be the output of the following Python code:

```
print(20//6)
```

- ○ 4
- ◉ 3
- ○ 2
- ○ 1
- ○ None of the above

Clear selection

21. How many unique numbers can you get from digits {1,2,3,4,5,6}, using all of the digits for each number.

- ○ 100
- ○ 36
- ◉ 720
- ○ 120
- ○ None of the above

Clear selection

20. What will be the output of the following Python code:

```
x = 1
y = [ ]
while x<5:
  y.append(x)
  x+=1

print(y)
```

- (●) [1, 2, 3, 4]
- ( ) [1, 2, 3, 4,5]
- ( ) [1, 2, 3]
- ( ) 5
- ( ) None of the above

23. What will be the output of the following Python code:

```
x = ["cat", "dog", "elephant"]
print(x[1])
```

- ○ cat
- ◉ dog
- ○ elephant
- ○ All of the above
- ○ None of the above

Clear selection

25. The output for the Python code below is

```
[val for val in np.arange(10) if val%5 ==0]
```

- [0,1,2,3,4,5,6,7,8,9]
- [0,5,10]
- [0,5]
- (●) None of the above

Clear selection

26. What will be the shape of x in the code below

```
x = np.random.rand(3,4,5)
x = x.reshape(-1,1)
```

- (3,4,5)
- (●) (60,1)
- (1,60)
- None of the above

Clear selection

27. What would be shape of x in the code below

```
x = np.random.rand(1,4,5,1,2)
x = np.squeeze(x)
```

- ○ (1,4,5,1,2)
- ◉ (4,5,2)
- ○ (4,5,1,2)
- ○ None of the above

Clear selection

1. If $A = \begin{bmatrix} 0 & 1 \\ 2 & 1 \end{bmatrix}$ then $2A^{-1} + A^T =$

a) $\begin{bmatrix} -1 & 5 \\ 4 & 2 \end{bmatrix}$

b) $\begin{bmatrix} -1 & 3 \\ 3 & 1 \end{bmatrix}$

c) $\begin{bmatrix} -1/2 & 5 \\ 1 & 5/2 \end{bmatrix}$

d) $\begin{bmatrix} 9/2 & 3/2 \\ 1 & 0 \end{bmatrix}$

e) none of the answers

2. The expression $||u+v||^2 + ||u-v||^2 =$

a) $2||u||^2 - 2||v||^2$

b) $2||u||^2 + 2||v||^2$

c) $2||u||^2 - 4||u||||v|| + 2||v||^2$

d) $2||u||^2 + 4||u||||v|| + 2||v||^2$

e) none of the answers

3. The value(s) of a for which the system having the following augmented matrix has a solution is (are):

$$\left(\begin{array}{ccc|c} 1 & -2 & 3 & a+2 \\ 0 & a-3 & 4 & 4 \\ 0 & 0 & 1 & a-1 \\ 0 & 0 & 0 & a(a-3) \end{array}\right)$$

a) $a = 3$

b) $a = 3$ and $a = 0$

c) $a = -3$

d) $a = 0$

e) none of the answers

4. Let $u = \begin{bmatrix} -3 \\ 1 \end{bmatrix}$ and $v = \begin{bmatrix} 1 \\ -3 \end{bmatrix}$ then the triangle inequality is:

a) $\sqrt{2} \leq 2\sqrt{10}$
b) $2\sqrt{2} \leq \sqrt{10}$
c) $1 \leq \sqrt{5}$
d) $\sqrt{2} \leq \sqrt{5}$
e) none of the answers

$a+b>c$

$b+c>a$

$a+c>b$

$|u|+|v| > |u+v|$

5. Consider the system:

$$\begin{cases} x_1 + 3x_2 - 2x_3 = 0 \\ 2x_1 + x_2 + x_3 = 0 \\ x_1 - x_2 + 2x_3 = 0 \end{cases}$$

Let A be the matrix obtained when we write the system as $Ax = 0$, then the $\mathrm{Col}(A)$ is:

a) a plane passing through the origin
b) a line passing through the origin
c) the origin
d) $\mathbb{R}^3$
e) none of the answers

6. Let A and B be two square matrices, then $(A-B)(A+B)-(A+B)^2$ is equal to:

a) $-2(BA+AB)$
b) $-2(BA+B^2)$
c) $-2AB$
d) $-2BA$
e) none of the answers

$A^2 + AB - AB - B^2 - A^2 - 2AB - B^2$

$= -2AB - 2B^2$

$= -2(AB + B^2)$

7. The derivative of the function f given by $f(x) = -4x^4 + \cos(x)$ is:

a) $f'(x) = -4x^3 + \sin(x)$.

b) $f'(x) = -4x^3 - \sin(x)$.

c) $f'(x) = -16x^3 - \sin(x)$.

d) $f'(x) = -16x^3 + \sin(x)$.

e) None of the answers.

8. The derivative, f', of a function f is negative everywhere. We know also that $f(0) = 0$. What must be true about $f(-1)$?

decrease

a) $f(-1)$ is negative.

b) $f(-1)$ is positive.

c) $f(-1)$ is zero.

d) Not enough information to conclude anything about $f(-1)$.

e) None of the answers.

9. The derivative, f', of a function f is given by $f'(x) = x^2 - 1$ for $x \in \mathbb{R}$. What must be true about f?

a) f attains a minimum value at $x = -1$.

b) f attains a maximum value at $x = -1$.

c) f attains a minimum value at $x = 0$.

d) f attains a maximum value at $x = 0$.

e) None of the answers.

$f'(x) = 0 \rightarrow$ point

$f''(\text{point}) \rightarrow$ min / max

max if negative value

Min if pos value

10. The derivative of the function g given by $g(x) = 3x^5 - \sin(2x)$ is:

$g'(x) = ?$ $15x^4 - 2\cos(2x)$

(a) $15x^4 - 2\cos(2x)$
(b) $15x^4 + 2\cos(2x)$
(c) $5x^4 - 2\sin(2x)$
(d) $15x^4$
(e) None of the answers.

11. The second derivative, h'', of a function h is positive everywhere. Which of the following must be true about h?

(a) h is concave upwards everywhere.
(b) h has no inflection points.
(c) h is linear.
(d) h is concave downwards everywhere.
(e) None of the answers.

pos neg
up ∪ ∩ down
min max

12. The function j has a derivative given by $j'(x) = x^3 - 4x$. At what values of x does $j(x)$ have a critical point?

(a) $x = 0$
(b) $x = 2, x = -2$
(c) $x = 2$
(d) $x = -2$
(e) All of the above.

$j'(x) = 0$
$x^3 - 4x = 0$
$x(x^2 - 4) = 0$
$x = 0$, or $x^2 - 4 = 0$

13. A study is conducted to understand the average height of adult residents in a city. The sample is drawn from people attending a basketball tournament in that city. Which of the following best describes the bias introduced in this sampling method?

Selection bias

(a) Voluntary Response Bias
(b) Nonresponse Bias
(c) Undercoverage Bias
(d) Convenience Sampling Bias
(e) None of the above

14. In a deck of 52 playing cards, if two cards are drawn randomly, what is the probability that the second card is a king given that the first card was a queen?

(a) $\frac{4}{51}$
(b) $\frac{4}{52}$
(c) $\frac{1}{13}$
(d) $\frac{4}{50}$
(e) $\frac{1}{52}$

in 52 there 4 queen / 4 king first is queen then 51 remain with 3 queen and 4 kings so prob of king is $\frac{4}{51}$

15. A researcher claims that the average weight of apples in an orchard is 150 grams with a 95% confidence interval of (148 grams, 152 grams). Which of the following statements is correct regarding the claim?

(a) There is a 95% chance that the true average weight of apples is between 148 and 152 grams.
(b) 95% of the apples in the orchard weigh between 148 and 152 grams.
(c) If we were to sample multiple times, 95% of the sample means would fall between 148 and 152 grams.
(d) The probability that an apple from the orchard weighs between 148 and 152 grams is 95%.
(e) None of the above.

16. ?Which of the following is not a valid Python data type

a) String ◯
b) Integer ◯
c) Float ◯
d) Char ◯

17. :What will be the output of the following Python code

```
print(29//6)
```

// rounds down to the nearest integer

- 5
- 4
- 3
- 2
- None of the above

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

- a) 1variable
- b) variable_name
- c) variable-name
- d) variable name

19. ?What will the expression 10 % 3 return

- a) 3
- b) 1
- c) 0
- d) 10

20.

?Which function is used to open a file in Python

a) file.open()

b) openFile()

c) open()

d) startFile()

21.

?What does the CSV stand for

a) Column Separated Values

b) Comma Separated Validity

c) Comma Separated Values

d) Column Serial Values

22.

?Which method is used to close an opened file in Python

a) finish()

b) stop()

c) terminate()

d) close()

23. ?Which keyword is used to define a class in Python

a) struct ○

b) class ○

c) define ○

d) type ○

24. ?What is the name of a function defined inside a class

a) Method ○

b) Inner function ○

c) Subfunction ○

d) Nested function ○

25. ?What is used to define a class variable shared by all instances of the class

a) @staticmethod ○

b) @classproperty ○

c) @classmethod ○

d) @shared ○

What is the name of the method that's automatically executed when an instance of ?a class is created

a) __init__

b) __main__

c) __start__

d) __new__

26.

?Given x = 5, what will be the value of x after x += 3

a) 5

b) 8

c) 3

d) 15

27.

?Given a = "Hello", what will a * 3 produce

a) HelloHelloHello

b) Hello3

c) Error

d) Hello

28.

?What is the result of the expression 3 * (2 + 3)

a) 15

b) 11

c) 21

d) 6

29.

?What is the result of the expression 7 // 3

to perform integer division

a) 2.33

b) 2

c) 3

d) 2.0

30.

?Which of the following is not a valid file mode in Python

write

a) w

read and write

b) r+

binry

c) b

d) t

31.

32.

Which method can be overridden to customize the string representation of an ?object

__str__() is used to provide a human-readable string representation of the object when the str() function is called or when the object is used in a string context, such as with print().
__repr__() is used to provide a detailed, unambiguous string representation of the object. It is primarily used by developers for debugging, logging, and evaluating expressions.

a) __str__()
b) __int__()
c) __repr__()
d) Both a) and c)

33.

?How do you access a method from a parent class in Python

a) super().method_name()
b) parent.method_name()
c) base.method_name()
d) superclass.method_name()

34.

?Which of these is not an instance method type in Python

a) Regular method
b) Class method
c) Static method
d) Dynamic method

35. Which of the following correctly describes the behavior of the ord() function in ?Python

a) It orders a list ○

b) It converts a character to its Unicode code point ○

c) It rounds off a number ○

d) It converts a number to octal representation ○

36. ?What will the following code output: print("Hello " + "World")

a) Hello World ○

b) HelloWorld ○

c) Hello+World ○

d) Error ○

37. ?Which method would you use to move the file pointer to the beginning of a file

a) file.reset() ○

b) file.begin() ○

c) file.seek(0) ○

d) file.move(0) ○

38. ?Which of the following is not a method of the file object

a) read() ○

b) writelines() ○

c) close() ○

d) move() ○

the correct one is rename()

If a class has two methods with the same name but different parameters, what is ?this an example of

a) Method overloading ◯

b) Method overriding ◯

when a subclass defines a method with the same name and parameters as a method in its superclass

c) Method hiding ◯

d) Method shadowing ◯

39.

Given a = [1,2,3,4,5] and b = a, if you execute b[2] = 10, what will be the value of ?a[2]

copy() method or the slice operator [:] to create a shallow copy.

a) 3 ◯

b) 10 ◯

c) Error ◯

d) None ◯

40.

What will be the output of the following code: print("Hello ?{name}".format(name="World"))

a) Hello World ◯

b) Hello {name} ◯

c) Hello {World} ◯

d) Error ◯

41.

42.

When using the with statement to open a file, what happens if an exception occurs ?within the with block

a) The file remains open and the program crashes ◯

b) The file is closed and the exception is ignored ◯

c) The file is closed and the exception is raised ◯

d) The file remains open and the exception is handled by the with block ◯

43.

?What happens when you open an existing file in x mode

a) The file is overwritten ◯

b) An error is raised ◯

c) The file is appended ◯

d) The file is read ◯

'x' mode is used to open a file for exclusive creation, meaning it will fail if the file already exists.

44.

?What is the result of the following code: len(open('filename.txt', 'r').readlines())

a) The number of characters in the file ◯

b) The number of words in the file ◯

c) The number of lines in the file ◯

d) The size of the file in bytes ◯

45.

When reading a CSV file using the csv.reader() method, what type of object does ?each row get returned as

a) Dictionary ◯

b) String ◯

c) List ◯

d) Tuple ◯