

**Exam**

2023W365217/8/9/20/22/59/60/84/91/92/95/96/97/98 / Exam / Exam

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**Verbrauchte Zeit** 1 Stunde  
**Punkte** 22,35/40,00  
**Bewertung** 55,88 von 100,00

**Frage 1**  
 Vollständig  
 Nicht bewertet  
 Frage markieren

By selecting "I confirm", I hereby declare under oath that I will work on this examination on my own without any help or any third-party assistance.  
 By selecting "I confirm", I understand that noncompliance results in invalidation of the assessment, whereby the invalidated examination will be added to the total number of retakes and noncompliance may result in further legal action.

a. I do not confirm  
 b. I confirm

Die richtige Antwort ist: I confirm

**Frage 2**  
 Richtig  
 Erreichte Punkte 1,00 von 1,00  
 Frage markieren

How many elements does a NumPy array with shape (1, 3, 1, 4, 2) hold?

a. 4  
 b. 3  
 c. 1  
 d. 2  
 e. 13142  
 f. 24 ✓  
 g. 11

Die richtige Antwort ist: 24

**Frage 3**  
 Richtig  
 Erreichte Punkte 1,00 von 1,00  
 Frage markieren

Consider the following class inheritance hierarchy (classes on top indicate base classes/superclasses):

```

    Animal
    |
    |
    +-----+
    |   |   |
    Bird Cat Dog
    |
    |       |
    Eagle GuardDog
    |
    |
    BaldEagle
  
```

Assume that you have instances of each class: `my_animal`, `my_bird`, `my_eagle`, `my_bald_eagle`, `my_cat`, `my_dog`, `my_guard_dog`. Which of the following boolean expressions evaluate to True?

a. `isinstance(my_guard_dog, Bird)`  
 b. `isinstance(my_eagle, BaldEagle)`  
 c. `isinstance(my_animal, Cat)`  
 d. `isinstance(my_eagle, Bird)` ✓  
 e. `isinstance(my_cat, Animal)` ✓  
 f. `isinstance(my_guard_dog, Eagle)`  
 g. `isinstance(my_bald_eagle, Animal)` ✓  
 h. `isinstance(my_cat, Bird)`

Die richtigen Antworten sind:  
`isinstance(my_eagle, Bird)`  
`'isinstance(my_bald_eagle, Animal)`  
`'isinstance(my_cat, Animal)`

**Test-Navigation****Statutory Declaration**

1

**Exam**

2	3	4	5	6	7	8
✓	✓	✓	●	✓	✓	●
9	10	11	12	13	14	15
●	●	●	●	✓	✓	●
16	17	18	19	✓	●	✓
✓	●	●	✓	✓	●	✓
23	24	25	26	27	28	29
✓	✓	✓	✓	✓	✓	●
30	31	32	33	34	35	36
●	●	●	●	●	✓	✓
37	38	39	40	41		
●	●	✓	●	●		

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**Frage 4**

Falsch

Erreichte Punkte  
0,00 von 1,00Frage  
markieren

Which output, if any, is generated by the following code?

```
for i in range(5):
    if i >= 3:
        continue
    elif i == 4:
        print("hi!")
    print(i)
```

- a. 0  
1  
2  
3  
hi!  
4
- b. No output is generated.
- c. 0  
1  
2  
3  
4
- d. 0 ✘  
1  
2  
hi!
- e. 0  
1  
2

Die richtige Antwort ist: 0

1  
2**Frage 5**

Teilweise richtig

Erreichte Punkte  
0,50 von 1,00Frage  
markieren

Which of the following statements are true regarding the following source code?

```
x = 1234
while x > 0:
    x = int(x / 10)
```

- a. The loop condition is checked exactly 5 times.
- b. The loop body is executed exactly 4 times. ✓
- c. It will result in an endless/infinite loop.
- d. The loop is not executed at all because the loop condition is initially `False`.

Die richtigen Antworten sind: The loop body is executed exactly 4 times, The loop condition is checked exactly 5 times.

**Frage 6**

Falsch

Erreichte Punkte  
0,00 von 1,00Frage  
markieren

Which of the following statements are true regarding the following code?

```
x = str(12)

def func(a):
    c = 10
    return a + c
```

- a. `str` is part of the built-in namespace. ✓
- b. Replacing the line `x = str(12)` with `x = a` would result in an error because `a` is from a hierarchically deeper namespace.
- c. `func` and `a` share the same namespace. ✘
- d. `c` is part of the global namespace. ✘
- e. `x` is part of the global namespace. ✓
- f. `x` cannot be accessed in `func` because of mismatching namespaces.

Die richtigen Antworten sind: `str` is part of the built-in namespace., `x` is part of the global namespace., Replacing the line `x = str(12)` with `x = a` would result in an error because `a` is from a hierarchically deeper namespace.**Frage 7**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

Assume you have the following nested list:

```
nested = [["a", "b"], ["c", "d"]]
```

Which of the following code snippets can be used to extract the string "c"?

- a. `nested[0][1]`
- b. `nested[1][0]` ✓
- c. `nested[0, 1]`
- d. `nested[1, 0]`

Die richtige Antwort ist:  
nested[1][0]

**Frage 8**

Teilweise richtig

Erreichte Punkte  
0,50 von 1,00

Frage  
markieren

Which of the following statements are true regarding data structures and (im)mutability?

- a. Creating an immutable data structure containing some object **x** also means that this object **x** cannot be changed anymore. **X**
- b. Python dictionaries are mutable. **✓**
- c. An immutable data structure means that once created, it cannot be changed anymore. **✓**
- d. Python lists are immutable.

Die richtigen Antworten sind: An immutable data structure means that once created, it cannot be changed anymore., Python dictionaries are mutable.

**Frage 9**

Teilweise richtig

Erreichte Punkte  
0,10 von 1,00

Frage  
markieren

Given a function

```
def my_func(*args, **kwargs):  
    # some code
```

which of the following invocations are valid (i.e., no error)?

- a. my\_func(1)
- b. my\_func()
- c. my\_func(1, a=2) **✓**
- d. my\_func(a=1, b=2) **✓**
- e. my\_func(a=1, a=2)
- f. my\_func(1, 2) **✓**
- g. my\_func(a=1, 2) **X**

Die richtigen Antworten sind:  
my\_func()

```
'  
my_func(1)  
  
'  
my_func(1, 2)  
  
'  
my_func(1, a=2)  
  
'  
my_func(a=1, b=2)
```

**Frage 10**

Teilweise richtig

Erreichte Punkte  
0,33 von 1,00

Frage  
entfernen

A Python dictionary ...

- a. ... can store arbitrary objects as its values (while only some objects can be used as keys).
- b. ... is a key-value mapping. **✓**
- c. ... is a sequence type.
- d. ... can only contain unique keys.

Die richtigen Antworten sind: ... is a key-value mapping., ... can only contain unique keys., ... can store arbitrary objects as its values (while only some objects can be used as keys).

**Frage 11**

Teilweise richtig

Erreichte Punkte  
0,50 von 1,00

Frage  
markieren

What is a variable in Python?

- a. A Python variable can only be assigned once.
- b. A Python variable stores the information on which objects can be assigned to it.
- c. A Python variable is something that can hold a value.
- d. A Python variable is effectively just a name/identifier which is bound to some object. **✓**

Die richtigen Antworten sind: A Python variable is something that can hold a value., A Python variable is effectively just a name/identifier which is bound to some object.

**Frage 12**

Falsch

Erreichte Punkte  
0,00 von 1,00

Frage  
markieren

What is the difference between object-instance attributes and class attributes?

- a. There is no difference, object attributes and class attributes are synonyms.
- b. Object attributes belong to the object and exist for each such object. Class attributes belong

markieren

- to the class and are copied for every created object.
- c. Object attributes belong to the object and exist for each such object. Class attributes belong to the class and exist only once.
  - d. Object attributes belong to the object but exist only once and are shared across all objects. Class attributes belong to the class and exist only once. x

Die richtige Antwort ist: Object attributes belong to the object and exist for each such object. Class attributes belong to the class and exist only once.

Frage 13

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage  
markieren

Which of the following statements are true regarding an algorithm?

- a. Algorithms are theoretical, they can never be implemented.
- b. An algorithm is a step-wise procedure to solve a problem. ✓
- c. Python can be used to implement an algorithm. ✓
- d. A problem might be solvable with many different algorithms. ✓

Die richtigen Antworten sind: An algorithm is a step-wise procedure to solve a problem., A problem might be solvable with many different algorithms., Python can be used to implement an algorithm.

Frage 14

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage  
entfernen

Which of the following statements are correct regarding classes and inheritance in Python?

- a. A child class is also called a subclass. ✓
- b. A parent class is also called a base class or a superclass. ✓
- c. Inheritance means inheriting attributes and methods defined in a parent class. ✓
- d. The class `object` is the root class of all classes in Python. ✓
- e. Deriving a new class from an existing class is also called extending an existing class. ✓

Die richtigen Antworten sind: The class `object` is the root class of all classes in Python., A parent class is also called a base class or a superclass., A child class is also called a subclass., Inheritance means inheriting attributes and methods defined in a parent class., Deriving a new class from an existing class is also called extending an existing class.

Frage 15

Falsch

Erreichte Punkte  
0,00 von 1,00

Frage  
entfernen

Consider the following code:

```
def f(x):
    try:
        g(x)
        print("f1")
    except TypeError:
        print("f2")
    finally:
        print("f3")
    print("f4")

def g(x):
    if x < 0:
        raise ValueError
    print("g1")
    if x > 10:
        raise TypeError
    print("g2")
```

What is the output when calling `f(-2)`?

Note: Errors in the answers below indicate that the function call ended with this error currently being raised.

- a. f3  
    ValueError
- b. ValueError x
- c. g1  
    f2  
    f3  
    TypeError
- d. g1  
    g2  
    f1  
    f3  
    f4
- e. f1  
    f3  
    ValueError
- f. f1  
    f3  
    f4
- g. g1  
    f2  
    f3  
    f4
- h. f1  
    f3

f3  
f4  
ValueError

Die richtige Antwort ist: f3  
ValueError

#### Frage 16

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage  
markieren

Given a list `my_list` of length 100, what does the following code do?

`my_list[-1:75:-4]`

- a. It returns a list of every fourth element when going backwards from the last index down to index 75. ✓
- b. It returns a list of every element when going backwards from index 75 down to index -4.
- c. It returns a list of every fourth element when going forwards from the first index up to index 75.
- d. It returns an empty list since this slice specification is invalid.

Die richtige Antwort ist: It returns a list of every fourth element when going backwards from the last index down to index 75.

#### Frage 17

Falsch

Erreichte Punkte  
0,00 von 1,00

Frage  
markieren

Given a function

```
def fun(a, *args, b, **kwargs):  
    # some code
```

what would `args` and `kwargs` contain after

```
my_list = [1, 2, 3, 4]  
my_dict = {"b": 10, "c": 20}  
fun(*mylist, **mydict)
```

?

- a. `args = (3, 4)` and `kwargs = {"b": 10, "c": 20}`
- b. `args = (1, 2, 3, 4)` and `kwargs = {"b": 10, "c": 20}`
- c. `args = (2, 3, 4)` and `kwargs = {"b": 10, "c": 20}` ✗
- d. `args = (3, 4)` and `kwargs = {"c": 20}`
- e. `args = (2, 3)` and `kwargs = {"b": 10, "c": 20}`
- f. `args = (2, 3)` and `kwargs = {"c": 20}`
- g. `args = (1, 2, 3, 4)` and `kwargs = {"c": 20}`
- h. `args = (2, 3, 4)` and `kwargs = {"c": 20}`

Die richtige Antwort ist: `args = (2, 3, 4)` and `kwargs = {"c": 20}`

#### Frage 18

Teilweise richtig

Erreichte Punkte  
0,50 von 1,00

Frage  
markieren

Assume you have an integer `x` which is potentially 0. You want to call the function `do_something()` but only if `x` is not 0 and `10 / x` is bigger than 1. Which of the following code snippets fulfill these requirements?

- a. `if x != 0 and 10 / x > 1:  
 do_something()` ✓
- b. `if x != 0 or 10 / x > 1:  
 do_something()`
- c. `if 10 / x > 1 and x != 0:  
 do_something()`
- d. `if x != 0:  
 if 10 / x > 1:  
 do_something()`
- e. `if 10 / x > 1 or x != 0:  
 do_something()`

Die richtigen Antworten sind:  
`if x != 0 and 10 / x > 1:  
 do_something()`

```
'  
if x != 0:  
    if 10 / x > 1:  
        do_something()
```

#### Frage 19

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage

Select the correct function implementations that fulfill the following task:

Write a function that takes a list of floats as input, converts them to integers and returns a new list of these integers.

markieren

Note: You can assume correct arguments.

- a. 

```
def convert(floats: list):
    for f in floats:
        f = int(f)
```
- b. 

```
def convert(floats: list):
    for f in floats:
        print(int(f))
```
- c. 

```
def convert(floats: list): ✓
    ints = []
    for f in floats:
        ints.append(int(f))
    return ints
```
- d. 

```
def convert(floats: list):
    for f in floats:
        f = int(f)
    return floats
```
- e. 

```
def convert(floats: list): ✓
    return [int(f) for f in floats]
```
- f. 

```
def convert(floats: list):
    for f in floats:
        yield int(f)
```

Die richtigen Antworten sind:

```
def convert(floats: list):
    return [int(f) for f in floats]
```

```
'def convert(floats: list):
    ints = []
    for f in floats:
        ints.append(int(f))
    return ints
```

**Frage 20**

Teilweise richtig

Erreichte Punkte  
0,33 von 1,00

Markierung  
entfernen

Which of the following statements are true regarding the following function?

```
def fun(some_list: list, i: int = 0)
    some_list[i] = 123
```

- a. The function has a default parameter. ✓
- b. The function has 1 parameter.
- c. The function has 2 parameters. ✓
- d. The function returns the object `some_list` after the modification.
- e. The function modifies the object `some_list` in-place.
- f. The function can only be called with a list argument because of the explicitly specified type `list`. ✗

Die richtigen Antworten sind: The function has 2 parameters., The function has a default parameter., The function modifies the object `some_list` in-place.

**Frage 21**

Falsch

Erreichte Punkte  
0,00 von 1,00

Markierung  
entfernen

Given the following class `Point` that represents a two-dimensional point, which of the following implementations of the special method `__eq__(self, other)` should be used to test another `Point` object for equality (overloading `==` operator)?

```
class Point:
    def __init__(self, x, y):
        self.x = x
        self.y = y

    a. def __eq__(self, other): ✗
        return self.x == other.x and self.y == other.y

    b. def __eq__(self, other):
        return self == other

    c. def __add__(self, other):
        if hasattr(other, "x") and hasattr(other, "y"):
            return self.x == other.x and self.y == other.y
        return NotImplemented

    d. def __add__(self, other):
        if hasattr(other, "x") and hasattr(other, "y"):
            return self.x == other.x and self.y == other.y

    e. def __eq__(self, other):
        if isinstance(other, Point):
            return self.x == other.x and self.y == other.y
        return NotImplemented
```

Die richtige Antwort ist:

```
def __eq__(self, other):
    if isinstance(other, Point):
```

```
return self.x == other.x and self.y == other.y  
return NotImplemented
```

**Frage 22**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

What are the primary control flow structures in Python?

- a. Classes.
- b. Loops. ✓
- c. Modules.
- d. Branches. ✓

Die richtigen Antworten sind: Branches., Loops.

**Frage 23**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

Which of the following statements are true regarding short-circuit evaluation?

- a. For `or`, if the first boolean expression is already `False`, the evaluation of the second is skipped.
- b. For `and`, if the first boolean expression is already `True`, the evaluation of the second is skipped.
- c. For `or`, if the first boolean expression is already `True`, the evaluation of the second is skipped. ✓
- d. For `and`, if the first boolean expression is already `False`, the evaluation of the second is skipped. ✓

Die richtigen Antworten sind: For `or`, if the first boolean expression is already `True`, the evaluation of the second is skipped., For `and`, if the first boolean expression is already `False`, the evaluation of the second is skipped.**Frage 24**

Falsch

Erreichte Punkte  
0,00 von 1,00Frage  
markieren

What is an object in Python?

- a. Everything.
- b. Reference types such as strings, lists, etc., but not primitive types such as integers, floats, etc. ✗
- c. Only the root class `object` is considered to be an object.
- d. Nothing, because everything is a variable.

Die richtige Antwort ist: Everything.

**Frage 25**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
entfernen

Which of the following statements are true regarding standard Python comments (comments starting with the # character)?

- a. Comments are used for documentation. ✓
- b. The more comments, the slower the program will run.
- c. Comments have no effect on the program behavior. ✓
- d. Wrong/Inconsistent comments with respect to the source code will crash the program.

Die richtigen Antworten sind: Comments are used for documentation., Comments have no effect on the program behavior.

**Frage 26**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

Which of the following statements are true after executing the following code?

```
a = 1.5  
b = 1.5  
c = a  
a = 2
```

- a. `c` refers to the integer object 2.
- b. `b` refers to the float object 1.5. ✓
- c. `b` and `c` refer to the same object in memory. ✓
- d. `a` refers to the integer object 2. ✓

Die richtigen Antworten sind: `b` refers to the float object 1.5., `a` refers to the integer object 2.**Frage 27**

Falsch

Erreichte Punkte  
0,00 von 1,00Frage  
markierenThe `int` data type in Python ...

- a. ... is represented with 128 bits.
- b. ... is represented with 64 bits. ✗
- c. ... does not have a fixed bit size.
- d. ... is represented with 32 bits.

Die richtige Antwort ist: ... does not have a fixed bit size.

**Frage 28**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

What are semantic errors?

- a. Errors that arise due to logical/thinking mistakes. ✓
- b. Errors that arise when aborting the execution of a running program.
- c. Errors that arise when using the wrong integrated development environment (IDE).
- d. Errors that arise when using incorrect syntax.

Die richtige Antwort ist: Errors that arise due to logical/thinking mistakes.

**Frage 29**

Teilweise richtig

Erreichte Punkte  
0,50 von 1,00Frage  
markieren

Which of the following statements are true regarding NumPy arrays?

- a. NumPy arrays are dynamically sized (their size can be changed arbitrarily).
- b. All elements in a NumPy array have the same data type. ✓
- c. The content/values/elements of a NumPy array cannot be changed after creation.
- d. NumPy arrays are (by design) less flexible than Python lists.

Die richtigen Antworten sind: NumPy arrays are (by design) less flexible than Python lists., All elements in a NumPy array have the same data type.

**Frage 30**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren  
entfernenWhat is the content of the tuple `x` after the following code?

```
x = ([["a", "b"], ["c", "d"], ["a", "c"]])
element = x[1]
element[0] = "EEE"

a. This code raises an error because tuples are immutable.
b. ([["a", "b"], ["EEE", "d"], ["a", "c"]]) ✓
c. ([["EEE", "b"], ["EEE", "d"], ["EEE", "c"]])
d. ([["a", "b"], ["c", "d"], ["a", "c"]])
```

Die richtige Antwort ist:  
([["a", "b"], ["EEE", "d"], ["a", "c"]])**Frage 31**Nicht  
beantwortetErreichbare  
Punkte: 1,00Frage  
markierenSelect all valid (i.e., no error) indexing and slicing code snippets for some list `my_list` of length 100.

- a. `my_list[-1]`
- b. `my_list[:100]`
- c. `my_list[-100]`
- d. `my_list[100]`
- e. `my_list[0]`
- f. `my_list[::]`
- g. `my_list[-15::]`
- h. `my_list[]`
- i. `my_list[0.5]`

Die richtigen Antworten sind:  
`my_list[-1]`

```
,
```

`my_list[0]`

```
,
```

`my_list[-100]`

```
,
```

`my_list[:100]`

```
,
```

`my_list[-15::]`

```
,
```

`my_list[::]`
**Frage 32**

Falsch

Erreichte Punkte  
0,00 von 1,00Which of the following code snippets can be used to copy the contents of the list `my_list` into a new list `copied_list`?

- a. `copied_list = my_list` ✗

Frage  
markieren

- b. `copied_list = [x for x in my_list]` ✓
- c. `copied_list = list(my_list)`
- d. `copied_list = my_list[:]`
- e. `copied_list = []
for x in my_list:
 copied_list.append(x)` ✓

Die richtigen Antworten sind:

```
copied_list = [x for x in my_list]

copied_list = []
for x in my_list:
    copied_list.append(x)

copied_list = list(my_list)
```

**Frage 33**

Nicht  
beantwortet

Erreichbare  
Punkte: 1,00

Frage  
markieren  
entfernen

Which of the following code snippets produce the same output as the following code?

```
i = 0
while i < 5:
    i += 1
    if i == 3:
        continue
    print(i)

a. for i in range(1, 6):
    if i == 3:
        break
    print(i)

b. for i in range(1, 6):
    print(i)

c. for i in range(1, 6):
    if i == 3:
        continue
    print(i)

d. if i in range(1, 6) and i != 3:
    print(i)
```

Die richtige Antwort ist:

```
for i in range(1, 6):
    if i == 3:
        continue
    print(i)
```

**Frage 34**

Teilweise richtig

Erreichte Punkte  
0,67 von 1,00

Frage  
markieren

Which of the following statements are true regarding `if-elif-else` statements?

- a. The evaluation is done from bottom to top.
- b. Multiple branches might be executed. ✗
- c. The evaluation is done from top to bottom. ✓
- d. There can be at most three `elif` branches.

Die richtige Antwort ist: The evaluation is done from top to bottom.

**Frage 35**

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage  
markieren

What is the output when executing the following code?

```
class Animal:
    def eat(self):
        print("Animal eats")

class Bird(Animal):
    pass

class Eagle(Bird):
    def eat(self):
        print("Eagle eats")

class BaldEagle(Eagle):
    pass

for a in [Animal(), Bird(), Eagle(), BaldEagle()]:
    a.eat()
```

- a. Animal eats

- Animal eats  
Animal eats  
Animal eats
- b. Animal eats  
Eagle eats
- c. Animal eats  
Bird eats  
Eagle eats  
BaldEagle eats
- d. There will be an error because classes `Bird` and `BaldEagle` do not have a method `eat`.
- e. Animal eats ✓  
Animal eats  
Eagle eats  
Eagle eats
- f. Animal eats  
Eagle eats  
Eagle eats  
Eagle eats

Die richtige Antwort ist: Animal eats  
Animal eats  
Eagle eats  
Eagle eats

### Frage 36

Richtig

Erreichte Punkte  
1,00 von 1,00

Frage  
markieren

Consider the code

```
def fun(n):
    if n < 0:
        return 0
    return fun(n - 1)
```

What is the result for the function call `fun(2)`?

- a. 2  
 b. 1  
 c. 0 ✓  
 d. There is no result, since it leads to an endless recursion.

Die richtige Antwort ist: 0

### Frage 37

Teilweise richtig

Erreichte Punkte  
0,67 von 1,00

Frage  
markieren

Consider a NumPy array with shape `(3, 4, 2)`. Which of the following shapes are valid (i.e., no error) when reshaping this array?

- a. `(12, 2)` ✓  
 b. `(4, -1)`  
 c. `(-1,)`  
 d. `(1, 3, 4, 2)` ✓  
 e. `(3, 1, 8)` ✓  
 f. `(2, 12)` ✓

Die richtigen Antworten sind:

`(-1,)`

`,`  
`(2, 12)`

`,`  
`(12, 2)`

`,`  
`(1, 3, 4, 2)`

`,`  
`(3, 1, 8)`

`,`  
`(4, -1)`

### Frage 38

Teilweise richtig

Erreichte Punkte  
0,67 von 1,00

Frage  
markieren

Which of the following statements are true regarding bits, bytes, encoding and decoding?

- a. Decoding is the process of retrieving the meaning of stored data.  
 b. 1 byte is 8 bits. ✓  
 c. Decoding is the reverse process of encoding. ✓  
 d. 1 bit is 8 bytes.

Die richtigen Antworten sind: 1 byte is 8 bits., Decoding is the process of retrieving the meaning of

stored data., Decoding is the reverse process of encoding.

**Frage 39**

Richtig

Erreichte Punkte  
1,00 von 1,00Frage  
markieren

Which loop constructs exist in Python?

- a. `for` loop. ✓
- b. `with` loop.
- c. `if` loop.
- d. `while` loop. ✓

Die richtigen Antworten sind: `while` loop, `for` loop.

**Frage 40**

Teilweise richtig

Erreichte Punkte  
0,33 von 1,00Frage  
markieren

Consider the content of a numpy array `my_arr` with shape (4, 5):

```
[[ 1  2  3  4  5]
 [ 6  7  8  9 10]
 [11 12 13 14 15]
 [16 17 18 19 20]]
```

Which of the following code snippets can be used to change the content of `my_array` to the following output?

```
[[ 1  2  0  0  5]
 [ 6  7  0  0 10]
 [11 12  0  0 15]
 [16 17 18 19 20]]
```

- a. `mask = np.array([[False, False, True, True, False], [False, False, True, True, False], [False, False, True, True, False], [False, False, False, False, False]])`  
`my_array[mask] = 0`
- b. `my_array[[0, 1, 2], 2:4] = 0`
- c. `my_array[:-1, 2:4] = 0`
- d. `my_array[:-1][2:4] = 0`

Die richtigen Antworten sind:

`my_array[:-1, 2:4] = 0`

```
'  
my_array[[0, 1, 2], 2:4] = 0  
  
'  
mask = np.array([[False, False, True, True, False],  
                [False, False, True, True, False],  
                [False, False, True, True, False],  
                [False, False, False, False, False]])  
my_array[mask] = 0
```

**Frage 41**

Teilweise richtig

Erreichte Punkte  
0,75 von 1,00Frage  
markieren

Consider the following code and assume that function `a_function()` does not raise any error:

```
try:  
    a_function()  
    raise TypeError  
except ValueError:  
    print("there was an exception!")  
finally:  
    print("done!")  
  
x = 123
```

Which of the following statements are true?

Note: The order of the answers can be ignored.

- a. The program continues normally, i.e., `x` is set to 123. ✗
- b. If this code is part of the main script, the program will crash with an unhandled `TypeError`. ✓
- c. The `TypeError` is caught.
- d. "done!" is printed. ✓
- e. A `TypeError` is raised. ✓
- f. "there was an exception!" is printed.
- g. Nothing is printed.

Die richtigen Antworten sind: "done!" is printed., A `TypeError` is raised., If this code is part of the main script, the program will crash with an unhandled `TypeError`.

