NUMPY ASSIGNMENT QUIZ

For a given numpy array, how will you change the dimensions to 5 using the existing parameters in the numpy array.
my_array = numpy.array([[[[1,3,4]]]])

Marked Answer :

numpy.array(my_array, ndmin=5)

Correct Answer :

numpy.array(my_array, ndmin=5)

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

For the given numpy arrays, Array1 and Array2, what will be the dot product for the same. Array1 = array([[1, 2, 3], [4, 5, 6]])
Array2 = array([[2, 3],[3, 2]])

Marked Answer :

Valueerror

Correct Answer :

Valueerror

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

In a given numpy array, using the slicing operations print the reverse of the array.
array = np.array([10,3,1,203,404,204,20,302,30,402,192])

Marked Answer :

array[::-1]

Correct Answer :

array[::-1]

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

What is the output of the below code:

a = [[1, 0], [0, 1]]

b = [[4, 1], [2, 2]]

np.dot(a, b)

Marked Answer :

array([[4, 1],[2, 2]])

Correct Answer :

array([[4, 1],[2, 2]])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

What is the output of the following code:
a = np.arange(3*4*5*6).reshape((3,4,5,6))
b = np.arange(3*4*5*6)[::-1].reshape((5,4,6,3))
np.dot(a, b)[2,3,2,1,2,2]

Marked Answer :

499128

Correct Answer :

499128

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

What will be output for the following code?

```
import numpy as np
a = np.array([3, 7, 32], dtype = complex)
print(a)
```

Marked Answer :

[3.+0.j 7.+0.j 32.+0.j]

Correct Answer :

[3.+0.j 7.+0.j 32.+0.j]

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

How to replace all values greater than a given value with a given cutoff? For example: In array 'ar1', replace all values greater than 30 to 30 and less than 10 to 10.

Input:

```
np.random.seed(100)
ar1 = np.random.uniform(1,50, 20)
```

Marked Answer :

Both of the above

Correct Answer :

Both of the above

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

For the given arrays, array1 and array2, if we stack the two arrays row wise, what will be the output?

```
array1 = np.array([[1,2],[3,4]])
array2 = np.array([[1,2],[3,4],[5,6],[7,8],[9,10]])
```

Marked Answer :

array([[1, 2],[3, 4],[1, 2],[3, 4],[5, 6],[7, 8],[9, 10]])

Correct Answer :

array([[1, 2],[3, 4],[1, 2],[3, 4],[5, 6],[7, 8],[9, 10]])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

For a given numpy array, how are you going to insert a new value at the specified position? array = np.array([10,3,1,203,404,204,20,302,30,402,192])

Elem_to_be_inserted = [1,2,3,4]

The position to be inserted at = before 404

Marked Answer :

numpy.insert(array1, 4, array2)

Correct Answer :

numpy.insert(array1, 4, array2)

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Create a 3×3 matrix using numpy, and all the values of the matrix must be a constant k.

Marked Answer :

numpy.full((3,3), 'k')

Correct Answer :

numpy.full((3,3), 'k')

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

For the given python code that implements bubble sort, what will be the output for the given numpy array.

```
def bub_sort(array):
for i in range(0, len(array)):
for j in range(0, len(array) – i – 1):
if array[j] < array[j + 1]:
temp = array[j]
array[j] = array[j + 1]
array[j+1] = temp
return array
my_array = numpy.array([20,14,25,16,45,60,12,9])
```

Marked Answer :

array([60, 45, 25, 20, 16, 14, 12, 9])

Correct Answer :

array([60, 45, 25, 20, 16, 14, 12, 9])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

For a given numpy array of the shape (2,5) ,How will you reshape the array in the shape (5,2).

Marked Answer :

numpy.reshape(5,2)

Correct Answer :

numpy.reshape(5,2)

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

What will be the shape of the sample numpy array after flattening it?
Sample = numpy.array([[1,2],[3,4],[5,6],[7,8]])

Marked Answer :

array([1, 2, 3, 4, 5, 6, 7, 8])

Correct Answer :

array([1, 2, 3, 4, 5, 6, 7, 8])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

In the given array, how can we get the following output – array([2, 5, 8]). Sample = numpy.array([[1,2,3],[4,5,6],[7,8,9],[10,11,12],[13,14,15]])

Marked Answer :

array[0:3, 1]

Correct Answer :

array[0:3, 1]

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Given two numpy arrays, we will perform Horizontally stack the given arrays array1 and array2. What will be the output of the above operation? The sample arrays are as follows.
Array1 = numpy.arange(20,2)
Array2 = numpy.array([1,2,3,4,5,6,7,8,9,10])

Marked Answer :

array([1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10])

Correct Answer :

None of the above

MARKS OBTAINED ✖ 0 **TOTAL MARKS : 1**

For the given arrays, array1 and array2, if we stack the two arrays column wise, what will be the output?
array1 = np.array([[1,2],[3,4]])
array2 = np.array([[5,6],[7,8]])

Marked Answer :

array([[1, 2, 5, 6],[3, 4, 7, 8]])

Correct Answer :

array([[1, 2, 5, 6],[3, 4, 7, 8]])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Given two vectors A and B, find the cross product between the two vectors. A = numpy.array([[4],[12],[29]])
B = numpy.array([[13],[21],[4]])

Marked Answer :

array([[-561 361 -72]])

Correct Answer :

array([[-561 361 -72]])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Given two vectors A and B, find the correlation coefficient of the following vectors.
A = numpy.array([1,3,5,7,9,11,13,15,17,19,21,23,25])
B = numpy.array([0,2,4,6,8,10,12,14,16,18,20, 22, 24])

Marked Answer :

array([[1., 1.],[1., 1.]])

Correct Answer :

array([[1., 1.],[1., 1.]])

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Create a nested numpy array from a given dictionary data.
sample = {1: [1,2],
2: [[1],[2]],
3: [[1,2], [3,4], [4,5]],
4: [1],
5: [1,2,3,4,5]}

Marked Answer :

array([[1, list([1, 2])], [2, list([[1], [2]])], [3, list([[1, 2], [3, 4], [4, 5]])], [4, list([1])], [5, list([1, 2, 3, 4, 5])]], dtype=object)

Correct Answer :

array([[1, list([1, 2])], [2, list([[1], [2]])], [3, list([[1, 2], [3, 4], [4, 5]])], [4, list([1])], [5, list([1, 2, 3, 4, 5])]], dtype=object)

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

A 2-dimensional array with 3 rows and 3 columns containing random numbers from 1 to 9 is given as – arr1= np.array([[3,2,1],[6,4,5],[8,7,9]])
Find the difference between the maximum element across the columns and the minimum element across the rows.

Marked Answer :

[7 3 2]

Correct Answer :

[7 3 2]

MARKS OBTAINED ✔ 1 **TOTAL MARKS : 1**

Total Marks **19 / 20**