

import numpy as np

Assessment 6:

Python Numpy:

- 1) What does NumPy mean in Python?
- 2) how to import Numpy in python?
- 3) how to create 1D Array?
- 4) how to identified datatype for Numpy array?
- 5) Create an array with 1 to 100 numbers and formatted with 10, 10.
- 6) How will you print size and shape of Numpyarray?
- 7) Create an array of 10 linearly spaced point between 9 to 99
- 8) Find all the odd number greater then 7 between 1 to 20, using fancy indexing method in array?

- 9) What will be the output of the below program?

```
> ar1 = np.array([1,2,3,4,5])
> ar2 = ar1
> print(ar2)
> ar2[4] = 999
> print(ar2)
> print(ar1)
```

- 10) Get the common items between two Numpy arrays

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

- 11) Explain how broadcasting in Numpy works?

- 12) Explain difference between np.loadtxt and np.genfromtxt?

- 13) What are the different options available in Numpy to stack arrays?

- 14) What is the use of append() function in Numpy? give an example

- 15) How to reshape an array?

- 16) How to get the positions where elements of two arrays match?

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

- 17) How to reverse the columns of a 2D array?

```
> # Input
> arr = np.arange(9).reshape(3,3)
```

- 18) How to compute the mean, median, standard deviation of a numpy array?

- 19) How to find if a given array has any null values?

- 20) How to drop all missing values from a numpy array?

```
> a = np.array([1,2,3,np.nan,5,6,7,np.nan])
```

- 21) How to find Percentile and IQR using Numpy array?

- 22) How to Compute Z-score using Numpy array?

- 23) Explain what is the use of max and argmax([10, 3, 2, 5, 1])

- 24) How can I plot an histogram showing cumulative sum of sachin's runscore, If I have all scores of Sachin saved in array "Sachin"

- 25) What are missing features in Numpy to enable data analysis on relational data ?

Handwritten calculation for question 10:

	1	2	3	2	3	4	3	4	5	6
a	1	2	3	2	3	4	3	4	5	6
b	7	2	10	2	7	4	9	4	9	8
b-a	6	0	7	0	4	0	6	0	4	2

argmin(b-a)