Task-8
Python – Mediocore Level

Question-1:

```
Given vector: [10 11 12 13 14]
New vector: [10.  0.  0.  0.  0.  0. 11.  0.  0.  0.  0.  0. 12.  0.  0.  0.  0.  0.
 13.  0.  0.  0.  0.  0. 14.]


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-2:

```
This program generates two random arrays and checks if they are equal or not.
Array 1: [1 0 1 0 0 1]
Array 2: [0 0 0 1 0 1]
False


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-3:

```
nan
True
False
nan
False


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-4:

```
Series with first letter of each element capitalised in index form:
 0         Amrita
1         School
2             Of
3    Engineering
4        Chennai
5         Campus
dtype: object

As a sentence,
Amrita School Of Engineering Chennai Campus

** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-5iii:

```
The identity matrix is:
 [[1. 0. 0. 0. 0.]
 [0. 1. 0. 0. 0.]
 [0. 0. 1. 0. 0.]
 [0. 0. 0. 1. 0.]
 [0. 0. 0. 0. 1.]]


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Question-5iv:

```
Array: [1.8 0.3 7.8 4.5]
The type of this array is float64

The array type is changed using 'arr = arr.astype(np.int64), so the type of the array now is int64
The converted array is: [1 0 7 4]


** Process exited - Return Code: 0 **
Press Enter to exit terminal
```

Vishnu Vignesh
CH.EN.U4CYS21093