

**KENDRIYA VIDYALAYA, IIT POWAI**  
**Class XII (Informatics Practices)**  
**Monthly Test AUGUST 2019**

Time : 1½ hrs.

MM : 20

1. Give the difference between Numpy array and Python List 1
2. Find the output: 3

```
import numpy as np
a1=np.array([[1,2,3],[4,5,6],[7,8,9]])
a2=np.array([[11,12,13],[14,15,16]])
(i)    a3=np.concatenate((a1,a2),axis=0)
        print(a3)
(ii)   a3=np.concatenate((a1,a2),axis=1)
        print(a3)
(iii)  a3=np.concatenate((a1,a2),axis=None)
        print(a3)
```

3. Write a program to perform addition and subtraction of two different 2D Arrays. 2
4. Give the output : 2

```
A = np.array([[1, 3], [2, 6], [5, 8]])
(i) print(A[1,1])      (ii) print(A[1][1])      (iii) print(A[1:][1])      (iv) print(A[1][1:])
```

5. Identify error(s) and write correct the code : 1

```
import numpy as np
A = np.arange([12])
B=A.reshape(4,4)
print(B)
```

6. Write Panda code to create empty Series. 1
7. Give output of following code :

```
Import pandas as pd
P=pd.Series(range(1,40,5),index=[x for x in "classxii"])
print(P) 1½
print(P.index) ½
print(P.size) ½
print(P.ndim) ½
```

8. What is use of fillna() in pandas, give example also? 1
9. Write python code to create DataFrame as follows : 3

	<b>Name</b>	<b>Subject</b>	<b>Marks</b>	<b>Grade</b>
<b>0</b>	Kiran	CS	58	C
<b>1</b>	Suman	Phy	65	B
<b>2</b>	Pinku	Chem	85	A
<b>3</b>	Kamla	CS	80	A

10. Write code to display above DataFrame (Q.9) sorted by Marks. 1
11. Write code to create pivot Table with “Name” as index and “Subject” as columns of Dataframe of Q.9. 2

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