

# PRAGYA GIRLS SCHOOL, INDORE



PERIODIC TEST – I (SESSION: 2023-24)

CLASS – XII

SUBJECT – INFORMATICS PRACTICES (065)

TIME: 1:00 Hr.

M.M. :20

## General Instructions:

1. All questions are compulsory. All programming questions are to be answered using Python Language only.
2. The paper is divided into 2 sections A and B.
3. Section A, consists of 05 questions (1-5). Each question carries 1 mark.
4. Section B, consists of 6 questions (6-11). Marks are written against each question.
5. Write down the correct option completely for MCQs.

## SECTION-A

- Q.1** What will be the output of following code: 1
- ```
import pandas as pd
s1=pd.Series([1,2,2,7,'Sachin',77.5])
print(s1.head())
print(s1.head(3))
```
- Q.2** What will be the output of following code: 1
- ```
import pandas as pd
s1=pd.Series([1,2,2,7,'Sachin',77.5])
print(s1.tail(-1))
print(s1.tail(2))
```
- Q.3** What is the output of the following program? 1
- ```
import pandas as pd1
d1 = {'one' : pd1.Series([1, 2, 3], index=['a', 'b', 'c']),
      'two' : pd1.Series([1, 2, 3, 4], index=['a', 'b', 'c','d'])}
df1 = pd1.DataFrame(d1)
print (df1)
```

- Q.4 Choose the correct way to create a Series using a dictionary:** **1**
- A. S1= pd.Series(["One":1,"Two":2,"Three":3])
  - B. S1= pd.Series({"One":1,"Two":2,"Three":3})
  - C. S1= pd.Series(("One":1,"Two":2,"Three":3))
  - D. S1= pd.Series("One":1,"Two":2,"Three":3)
- Q.5 Write a Pandas program to create and display a one-dimensional array-like object containing an array of data.** **1**

### SECTION-B

- Q.6 Predict the output of the following Series S1 and S2:** **2**
- ```
import pandas as pd1
S1 = pd1.Series([1,2,3])
S2 = pd1.Series([1,2,4])
u1=S1+S2 #addition operation print (u)
u2=S1*S2 # multiplication operation
print (u1)
print (u2)
```
- Q.7 Predict the output:** **2**
- ```
import pandas as pd
S=pd.Series([10,20,30,40,50,60])
print("The original element of the series:")
print(S) #Statement1
S[2:5]=30
print("Editted series is:")
print(S) #Statement2
```
- Q.8 Suppose you have a series:** **2**
- ```
s = pd.Series([3, 2, 1, 4], index=['a', 'b', 'c', 'd'])
```
- Write the command to do the following:
- a)Sort in ascending order of index
  - b)Sort in descending order of values
- Q.9 Carefully observe the following code:** **2**
- ```
>>> import pandas as pd
>>> xiic = {'amit':34, 'kajal':27, 'ramesh':37}
>>> xiid = {'kajal':34, 'lalta':33, 'prakash':38}
>>> result = {'PT1':xiic, 'PT2':xiid}
>>> df = pd.DataFrame(result)
>>> print(df)
```
- Answer the following:
- i) List the index of the dataframe df
  - ii) Find the output of the following code : print(df.loc['kajal':,'ramesh'])

**Q.10 Read the following code and find the output of each line:**

**3**

```
import pandas as pd
import numpy as np
s=pd.Series([5,6,7,8,9,np.nan,11,12,13,14],index=list('abcdefghij'))
print(s.index) #line1
print(s.size) #line2
print(s.hasnans) #line3
print(s.shape) #line4
print(s.head(3)) #line5
print(s.tail(2)) #line6
```

**Q.11 Answer the questions given below:**

**4**

**A. Minimum number of arguments we require to pass in pandas series –**

1. 0
2. 1
3. 2
4. 3

**B. What we pass in data frame in pandas?**

1. Integer
2. String
3. Pandas series
4. All

**C. Write a small python code to drop a row from DataFrame labeled as 0.**

**D. In pandas, S is a series with the following result:**

`S=pd.Series([5,10,15,20,25])`

The series object is automatically indexed as 0,1,2,3,4. Write a statement to assign the series as a, b, c, d,e index explicitly.