

ARMY PUBLIC SCHOOL,DEVLALI
SESSION:2020-21
HALF YEARLY EXAM
CLASS–XII
INFORMATICS PRACTICES (065)

TIME : 2^{1/2}hrs

MAXIMUM MARK : 60

- 1) A router can be replaced with a bridge. (1)
a) True
b) False
- 2) A document that uses HTTP is called a _____. (1)
- 3) The number of rows in a data frame are by default equal to number of rows in a CSV file, it created from a CSV file . (1)
a) True
b) False
- 4) While writing a data frame onto a CSV file, which argument would you use in to_sql() for NaN values representation as NULL ? (1)
a) NaN = NULL
b) na_rep = NULL
c) na_value = NULL
d) na = NULL
- 5) Every NIC card has a unique physical address called _____. (1)
- 6) Switch is a _____. (1)
a) Broadcast device
b) Unicast device
c) Multicast device
d) None of the above
- 7) To write data of a data frame in a MySQL table, to_sql() function is used. (1)
- 8) The tree topology is said to be a combination of ____ and ____ topologies. (1)
- 9) URL's are of 2 types _____ and _____.
- 10) Date() and Day() return the same thing. (1)
a) True
b) False
- 11) To specify a separator other than comma in a CSV file , _____ argument is used. (1)
- 12) A repeater takes a weak and corrupted signal and _____ it. (1)

- a) Amplifies
 - b) Regenerates
 - c) Resembles
 - d) Reroutes
- 13) _____function sorts on the basis of the values of a dataframe. (1)
- 14) To get the transpose of a data frame df, you can write _____. (1)
- a) df.T
 - b) df.Transpose
 - c) df.swap
 - d) df.Transpose()
- 15) Function _____fills the missing values. (1)
- 16) To display the 3rd , 4th and 5th columns from the 6th to 9th rows of a dataframe(1) df , you can write _____ .
- a) df.loc[6:9,3:5]
 - b) df.loc[6:10,3:6]
 - c) df.iloc[6:10,3:6]
 - d) df.iloc[6:9,3:5]
- 17) Which of the following is not a valid function that can be used with dataframes ? (1)
- a) count()
 - b) sum()
 - c) length()
 - d) mad()
- 18) In the Select clause _____is used to collect those rows that have the same value in a specified column. (1)
- 19) To get a substring of a string , other than substr() , function _____is also used. (1)
- 20) To obtain all columns, use a(n) instead of listing all column names in the select list. (1)

SUBJECTIVE QUESTIONS :

- Q.1 Name any 4 character function of mysql. (2)
- Q.2 What is a function ? (1)
- Q.3 Name 4 different types of chat. (2)
- Q.4 Write any 4 limitation of e-mail. (2)
- Q.5 Give any 4 VoIP based software. (2)
- Q.6 What is WWW ? (1)
- Q.7 Write advantages of linear topology (2)
- Q.8 Write disadvantages of mesh topology (2)
- Q.9 What is a concentrator ? (2)
- Q.10 Name the 2 types of communication channels along with examples. (2)

Q.11 What are network services ? Give 2 examples. (2)

Q.12 Write some basic differences between LAN and WAN. (2)

Q.13 What is the output of the following code ? (2)

```
data = {'age': [20, 23, 22], 'name': ['Ruhi', 'Ali', 'Sam']}  
df1 = pd.DataFrame(data, index=[1, 2, 3])  
print("Before")  
print(df1)  
df1['Edu'] = ['BA', 'BE', 'MBA']  
print("After")  
print(df1)
```

Q.14 Write code statements to list the following , from a dataframe namely sales. (3)

- List only columns "Item" and "Revenue".
- List rows from 3 to 7.
- List the value of cell in 5th row , "Item" column.

Q.15 What is the output of the following code ? (2)

```
Stationery = ['pencils', 'notebooks', 'scales', 'erasers']  
S = pd.Series([20, 33, 52, 10], index = Stationery)  
S2 = pd.Series([17, 13, 31, 32], index = Stationery)  
print (S + S2)  
S = S + S2  
print(S + S2)
```

Q.16 What is the output of the following code ? (3)

```
import pandas as pd  
d = {'one' : pd.Series([1., 2., 3.], index = ['a', 'b', 'c']),  
     'two' : pd.Series([1., 2., 3., 4.], index = ['a', 'b', 'c', 'd'])}  
df = pd.DataFrame(d)  
df1 = pd.DataFrame(d, index = ['d', 'b', 'a'])  
df2 = pd.DataFrame(d, index = ['d', 'a'], columns = ['two', 'three'])  
print(df)  
print(df1)  
print(df2)
```

Q.17 Consider the dataframes one and two given below . (3)

```
>>>one  
   name  value  
0    p    1.0  
1    q    2.0  
2    r    NaN
```

```
>>>two  
   name  value  
0    p    1.0
```

1	q	NaN
2	r	3.0
3	s	4.0

What will be the output of following statements :

- a) `pd.concat([one,two])`
- b) `pd.concat([one,two], axis=1)`
- c) `pd.merge(one, two, on='name')`

Q.18 Sarthak, a student of class XII, created a table “Class” . Grade is one of the columns of this table . To find the details of students whose Grades have not been entered , he wrote the following MySQL query, which did not give the desired result :

`Select * from Class where grade = “NULL”;`

Help Sarthak to run the query by removing the errors from the query and write the correct query. (2)

Q.19 Write a query to display the difference of highest and lowest salary of each department having maximum salary greater than 4000.

(Given : sal is salary column , deptno is each department , and table name is empl) (2)

Q.20 Consider 2 fields b_date , which stores the birth date and j_date , which stores the joining date of an employee. Write commands to find out and display the approximate age of an employee as on today. (1)