

ROLL NUMBER				
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SET	1
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QP.Code:065/01/1



**INDIAN SCHOOL MUSCAT  
FIRST PRE-BOARD EXAMINATION 2022-23  
INFORMATICS PRACTICES(065)**



CLASS :XII  
DATE: 15-01-2023

TIME ALLOTTED : 3 HRS.  
MAXIMUM MARKS: 70

**GENERAL INSTRUCTIONS:**

**Read the Questions carefully before start writing the Answers**

Section A: 18 marks

Section B: 14 marks

Section C: 15 marks

Section D: 15 Marks

Section E: 08 Marks

**SECTION - A**

1. In Mysql, \_\_\_\_\_ command is used to ADD a new value to the table. 1
2. In Python \_\_\_\_\_ function is used to access groups rows/ columns. 1  
 a. tail()      b. max()      c. loc()      d. head()
3. Which of the following is not a cyber-crime? 1  
 a. Phishing      b. Ransomware      c. Hacking      d. Tracking
4. Proprietary software is a software which is available \_\_\_\_\_ 1  
 a. free of charge      b. on paying license fee      c. free for first year only  
 d. none of the above
5. Any fraudulent business practice that extracts money e from an unsuspecting, ignorant person is called \_\_\_\_\_ 1  
 a. Stealing      b. Scam      c. Violation of copyright      d. Digital footprint
6. Full form of MAN is 1  
 a. Metro Area Net Work      b. Metropolitan Area Net Work      c. Member Area Net Work  
 d. Main Area Net Work
7. Define URL with an example. 1
8. In MSql \_\_\_\_\_ is used to save the transaction permanent. 1  
 a. Insert      b. Commit      c. Alter      d. None
9. \_\_\_\_\_ is a technology related health condition affecting eyesight. 1  
 a. Computer vision strain      b. Computer vision syndrome

- c. Eyesight syndrome                      d. Vision imbalance

10. The \_\_\_\_\_ is the permissions given to use a product or someone's creator by the copyright holder. 1  
a. Source code                      b. Licence                      c. Software authority                      d. Digital rights .
11. Ms. Sharma, the class teacher wants to add a new column, the scores of Grade with the values, 'A', 'B', 'A', 'A', 'B', 'A' choose the command to do so: 1  
a.df.column=['A','B','A','A','B','A']                      b.df['Grade']=['A','B','A','A','B','A']  
c.df.loc['Grade']= ['A','B','A','A','B','A']                      d.Both (b) and (c) are correct
12. To get the number of elements in a Series object, attribute may be used. 1  
a. index    b.size    c.itemsize    d.ndim
13. Which of the following are feasible methods of e-waste management? 1  
a. Reduce                      b. Reuse                      c. Recycle                      d. All of the above
14. The axis 0 identifies a dataframe's 1  
a.rows    b.columns    c.values    d.datatype
15. Whenever we surf the Internet using smartphones we leave a trail of data reflecting the activities performed by us online, which is our \_\_\_\_\_ 1  
a. Digital footprint                      b. Digital activities                      c. Online handprint                      d. Internet activities
16. \_\_\_\_\_ is the set of rules for transferring files -- such as text, images, sound, video and other multimedia files over the web. 1

**Directions (Q No. 17-18) In the questions given below there are two statements marked as Assertion (A) and Reason (R) . Read the statements and choose the correct option.**

- a. Both (A) and (R) are True, and (R) is the correct explanation of (A).  
b. Both (A) and (R) are True, but (R) is not the correct explanation of (A).  
c. (A) is true, but (R) is false.  
d. (A) is false, but (R) is true.

17. Assertion (A): Amit has stolen the content of a research paper and published it online. Amit has performed cybercrime. 1  
Reason (R): Plagiarism is the act of stealing someone's work and presenting it as one's own work. .
18. Assertion (A): To display the first four elements of a Series object, you may write S[:4]. 1  
Reason (R): To display the first five rows of a Series object S, you may use tail() function.

### SECTION- B

19. Sonal needs to display name of teachers, who have "0" as the third character in their name. She wrote the following query. 2  
**SELECT NAME FROM TEACHER WHERE NAME = "\$S0?";**  
But the query is not producing the result. Identify the problem.
20. Write a PYTHON program to create a series object using a dictionary that stores the number of students in each house of class 12H of your school. 2  
**Note: Assume four house names are Red, Green, Blue and Yellow having 09, 10, 09, 10 students respectively and pandas library has been imported as pd.**

21. Define Data Frame and write a Python code to transfer the data from "Marks.CSV " to Data Frame named as DF1. 2
22. How aggregate functions are different from single row functions. Write any one function name of each. 2

OR

Explain the following Terms

- Web Browser with an example.
- Web Page

23. Carefully observe the following code and write the output based on the print statement. 2

```
import pandas as pd
d1={'A':3000,'B':8000,'D':12000,'E': 18000}
d2={'A' :13000,'B':14000,'C':12000}
totSales={"Term":d1,"Values":d2}
df=pd.DataFrame(totSales)
print(df)
print(df.size)
print(df.ndim)
print(df.Term)
```

OR

List any four benefits of e-waste management.

24. Find the output of the following:

```
import pandas as pd
import numpy as np
list1=np.array([23,45,56,78])
print(list1[2]>45)
print(list1>45)
```

25. What is the difference between CHAR and VARCHAR data type in mysql? Explain with an example. 2

### SECTION-C

26. Write a Python code to create the following DATA FRAME named as PLAYER. 3

	Player Name	No of Matches	Runs Scored
0	Sachin	320	18999
1	Dravid	312	14324
2	Yuvaraj	314	12345
3	Dinesh Karthik	216	8345

27. JAYA has recently shifted to a new city and school. She does not know many people in her new city and school. But all of a sudden, someone is posting negative, demeaning comments on her social networking profile etc. She is also getting repeated mails from unknown people. Every time she goes online, she finds someone chasing her online.
- What is this happening to JAYA?
  - What immediate action should she take to handle it?
  - Is there any law in India to handle such issues? Discuss briefly.

3

28. Consider the given DataFrame 'EMPLOYEE':

```

      Name
0    RAJA
1   SCOTT
2    RHEA
3   PETER

```

3

Write suitable Python statements for the following:

- Add a new column called SALARY with the following data: [2000,1200,3000,2300]
- Add a new row to EMPLOYEE data frame as ["Rahul",1200].

29. Find the output of the following:

- Select Substr("WELCOMES",length("we"));
- Select Truncate(4534.789,-1);
- Select Replace("Corporate","o","\*");

3

30. Based on table STUD\_MASTER given here, write suitable SQL queries for the following

Rollno	Name	Class	Gender	City	Marks
23	Paul	XII	MALE	DELHI	345
34	Nancy	XII	FEMALE	MUMBAI	425
12	Nishant	XII	MALE	MUMBAI	295
32	Payal	X	FEMALE	DELHI	255
14	Arun	X	MALE	CHENNAI	365
21	Sanjey	XII	MALE	CHENNAI	385
20	Anish	XI	MALE	COCHIN	315

3

- Write a Query to display how many students are there in each Class.
- Write a Query to display all the students who are all from city "Delhi" and Class is XI.
- Write a Query to display how many students are scored above 450.

OR

Explain the following:

Commit

b. Rollback To

c. Save Point

### SECTION -D

31. Explain the following SQL functions using suitable examples.

5\*1=5

- i. SUBSTR()
- ii. SQRT()
- iii. DAYOFMONTH()
- iv. COUNT()
- v. TRIM()

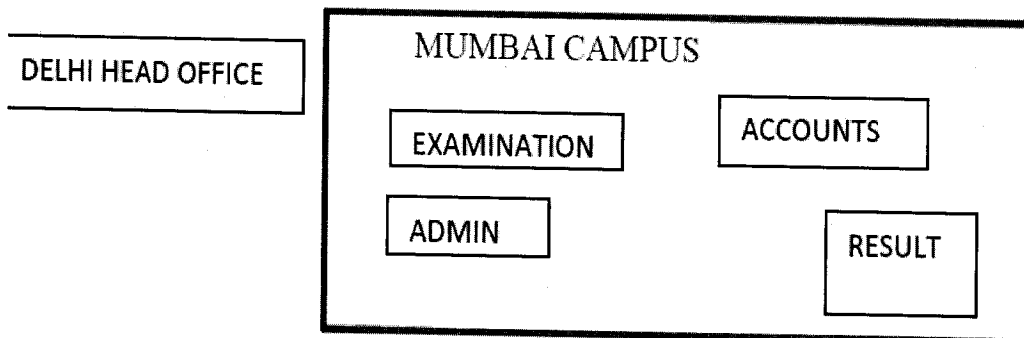
OR

Write a Query for the following statement(s)

- i. Write a Query to display the Day number of the month from "2002-12-12 11:23:34"
- ii. Write Query to find the power of 5 raised to 4
- iii. Write a Query display the remainder 34 divided by 2
- iv. Write a Query to remove the decimal point from the number 23.56
- v. Write a Query to convert the string "master mind" as upper case.

32. M & M Computer services Ltd. is an international educational organization. It is planning to set up its India campus at Mumbai with its head office in Delhi. The Mumbai office campus has four main buildings-ADMIN, ACCOUNTS, EXAMINATION and RESULT. You as a network expert have to suggest the best network related solutions for their problems raised in (i) to (v), keeping in mind the distances between the buildings and other given parameters.

5



Distances between various buildings:	
ADMIN TO ACCOUNTS	55 m
DELHI Head Office to MUMBAI campus	2150 Km
ADMIN TO RESULT	50 m
ACCOUNTS TO EXAMINATION	55 m
ACCOUNTS TO RESULT	50 m
EXAMINATION TO RESULT	45 m
ADMIN TO EXAMINATION	90 m

Number of Computers installed in various buildings	
Accounts	25
Examination	15
Admin	240
Result	10
Delhi Head Office	50

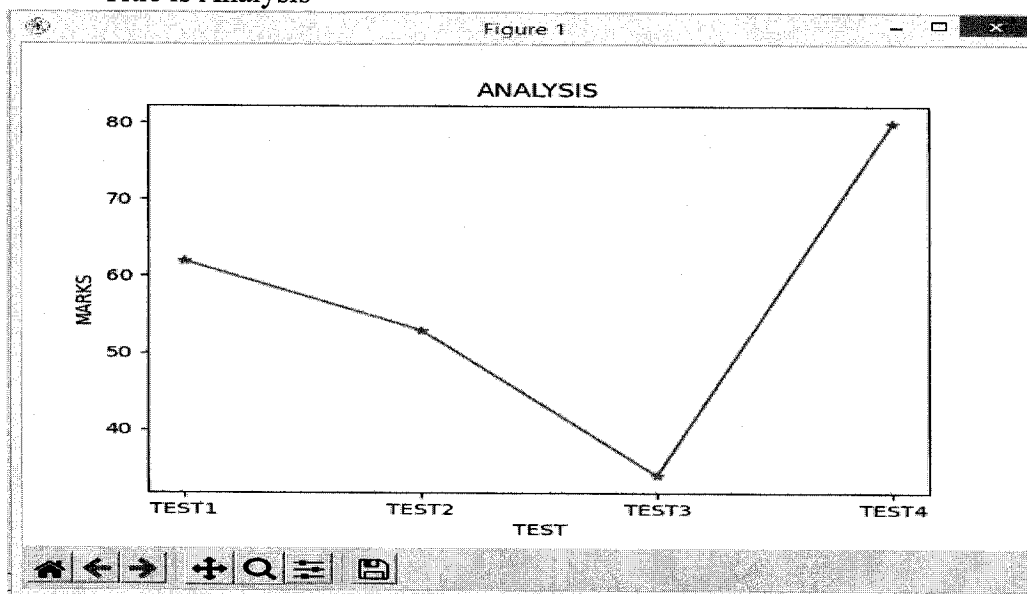
- Suggest and draw cable layout to efficiently connect various buildings within the MUMBAI campus for a wired connectivity.
- Which networking device will you suggest to be procured by the company to interconnect all the computers of various buildings of MUMBAI campus?
- Suggest Which Building you will keep the server? What is the reason?
- Which of the following will you suggest to establish the online face to face communication between the people in the ADMIN office of Mumbai campus and Delhi head office?  
1) Mail          2) Chat          3) Video conferencing          4) Telephone

33. Mr. Manish is new learner of python to CSV Connection concept. Explain What is the meaning of CSV file and write the method(s) for transferring data from python to CSV and CSV to Python.

Write a Simple code to create the following Data Frame named as CSVDATA from EMPLOYEE.CSV.

### SECTION-E

34. Write a Python program to create a LINE chart based on the following instructions:
- Data for creating chart is  
TEST=['TEST1','TEST2','TEST3','TEST4']  
MARKS=[62,53,34,80]
  - X label is TEST  
Y label is Marks  
Title is Analysis



OR

Write a python program to plot a bar chart based on the given data to depict the changing weekly average temperature in MUMBAI for four weeks.

Week=[1,2,3,4]

Avg\_week\_temp=[40,42,38,44]

35. Ms.Dimple, a data analyst has designed the Data Frame EMPDATA that contains data about Employee's Salary. Write a python program to create the following dataframe and display all the details of employees whose salary is greater than 3100.

4

	EMPNO	EMP_Name	SALARY
0	1	Allan	3420
1	2	Karnn	2415
2	3	Kumar	1490
3	4	Anisha	3400
4	5	Sanjey	5970

OR

Ms.Naima, a data analyst has designed the Data Frame EMPDATA that contains data about Employee's Salary. Write a python program to create the following dataframe and display all the details of Allan and Sanjey.

	EMPNO	EMP_Name	SALARY
0	1	Allan	3420
1	2	Karnn	2415
2	3	Kumar	1490
3	4	Anisha	3400
4	5	Sanjey	5970

\*\*\*\*END OF THE QUESTION PAPER\*\*\*\*





ROLL NUMBER				
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SET	2
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QP.Code:065/01/2



**INDIAN SCHOOL MUSCAT**  
**FIRST PRE-BOARD EXAMINATION 2022-23**  
**INFORMATICS PRACTICES(065)**



CLASS :XII  
DATE: 15-01-2023

TIME ALLOTTED : 3 HRS.  
MAXIMUM MARKS: 70

**GENERAL INSTRUCTIONS:**

**Read the Questions carefully before start writing the Answers**

Section A: 18 marks

Section B: 14 marks

Section C: 15 marks

Section D: 15 Marks

Section E: 08 Marks

**SECTION - A**

1. Full form of MAN is 1
  - a. Metro Area Net Work    b. Metropolitan Area Net Work    c. Member Area Net Work
  - d. Main Area Net Work
2. Define Domain Name with an example. 1
3. In MSql \_\_\_\_\_ is used to save the transaction permanent. 1
  - a. Insert    b. Commit    c. Alter    d. None
4. \_\_\_\_\_ is a technology related health condition affecting eyesight. 1
  - a. Computer vision strain    b. Computer vision syndrome
  - c. Eyesight syndrome    d. Vision imbalance
5. Ms. Sharma, the class teacher wants to add a new column, the scores of Grade with the values, 'A', 'B', 'A', 'A', 'B', 'A' choose the command to do so: 1
  - a) df.column=['A','B','A','A','B','A']    b) df['Grade']=['A','B','A','A','B','A']
  - c) df.loc['Grade']=['A','B','A','A','B','A']    d) Both (b) and (c) are correct
6. In Mysql, \_\_\_\_\_ command is used to Delete a Column from the table. 1
7. In Python \_\_\_\_\_ function is used to access groups rows/ columns. 1
  - i. tail()    ii. max()    iii. loc()    iv. head()
8. Which of the following is not a cyber-crime? 1
  - i. a. Phishing    b. Ransomware    c. Hacking    d. Tracking

9. Proprietary software is a software which is available \_\_\_\_\_ 1  
a. free of charge    b. on paying license fee    c. free for first year only  
d. none of the above
10. Any fraudulent business practice that extracts money e from an unsuspecting, ignorant person is called \_\_\_\_\_ 1  
a. Stealing    b. Scam    c. Violation of copyright    d. Digital footprint
11. The \_\_\_\_\_ is the permissions given to use a product or someone's creator by the copyright holder. 1  
a. Source code    b. Licence    c. Software authority    d. Digital rights .
12. Whenever we surf the Internet using smartphones we leave a trail of data reflecting the activities performed by us online, which is our \_\_\_\_\_ 1  
a. Digital footprint    b. Digital activities    c. Online handprint    d. Internet activities
13. \_\_\_\_\_ is the set of rules for transferring files -- such as text, images, sound, video and other multimedia files over the web. 1
14. To get the number of elements in a Series object, attribute may be used. 1  
(a) index    (b) size    (c) itemsize    (d) ndim
15. Which of the following are feasible methods of e-waste management? 1  
a. Reduce    b. Reuse    c. Recycle    d. All of the above
16. The axis 0 identifies a dataframe's 1  
(a) rows    (b) columns    (c) values    (d) datatype

**Directions (Q No. 17-18) In the questions given below there are two statements marked as Assertion (A) and Reason (R) . Read the statements and choose the correct option.**

- a. Both (A) and (R) are True, and (R) is the correct explanation of (A).
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17. Assertion (A): Amit has stolen the content of a research paper and published it online. Amit has performed cybercrime. 1  
Reason (R): Plagiarism is the act of stealing someone's work and presenting it as one's own work. .
18. Assertion (A): To display the first four elements of a Series object, you may write S[:4]. 1  
Reason (R): To display the first five rows of a Series object S, you may use tail() function.

### SECTION- B

19. Suresh needs to display name of teachers, who have "S" as the third character in their name. He wrote the following query. 2  
**SELECT NAME FROM TEACHER WHERE NAME = "SSS?";**  
But the query is'nt producing the result. Identify the problem.
20. Define Data Frame and write a Python code to transfer the date from "Salary.CSV " to Data Frame named as DFSALARY. 2

21. Write a PYTHON program to create a series object using a dictionary that stores the number of students in each house of class 12H of your school. 2  
**Note: Assume four house names are Red, Green, Blue and Yellow having 12, 15, 24, 10 students respectively and pandas library has been imported as pd.**
22. Carefully observe the following code and write the output based on the print statement. 2  
**import pandas as pd**  
**d1={'A':3000,'B':8000,'D':12000,'E': 18000}**  
**d2={'A' :13000,'B':14000,'C':12000}**  
**totSales={"Term":d1,"Values":d2}**  
**df=pd.DataFrame(totSales)**  
**print(df)**  
**print(df.size)**  
**print(df.ndim)**  
**print(df.Term)**
- OR
- List any four benefits of e-waste management.
23. How aggregate functions are different from single row functions. Write any one function name of each. 2  
 OR
- Explain the following Terms 2  
 a. Web Browser with an example.  
 b. Web Page
24. Find the output of the following: 2  
**import pandas as pd**  
**import numpy as np**  
**list1=np.array([23,45,56,78])**  
**print(list1[2]<45)**  
**print(list1<45)**
25. What is the difference between CHAR and VARCHAR data type in mysql? Explain with an example. 2

### SECTION-C

26. Write a Python code to create the following DATA FRAME named as PLAYER. 3

	Player Name	No of Matches	Runs Scored
0	Sachin	320	18999
1	Dravid	312	14324
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27. Consider the given DataFrame ‘EMPLOYEE’:

	Name
0	RAJA
1	SCOTT
2	RHEA
3	PETER

3

Write suitable Python statements for the following:

- i. Add a new column called NETSAL with the following data: [2000,1200,3000,2300]
- ii. Add a new row to EMPLOYEE data frame as ["Rahul",1200].

28. JAYA has recently shifted to a new city and school. She does not know many people in her new city and school. But all of a sudden, someone is posting negative, demeaning comments on her social networking profile etc.  
She is also getting repeated mails from unknown people. Every time she goes online, she finds someone chasing her online.  
i. What is this happening to JAYA?  
ii. What immediate action should she take to handle it?  
iii. Is there any law in India to handle such issues? Discuss briefly.

3

29. Find the output of the following:

- i. Select Substr(“WELCOMES”,length(“OM”));
- ii. Select Truncate(4534.789,-2);
- iii. Select Replace(“Corporate”,”o,”%”);

3

30. Based on table STUD\_MASTER given here, write suitable SQL queries for the following

Rollno	Name	Class	Gender	City	Marks
23	Paul	XII	MALE	DELHI	345
34	Nancy	XII	FEMALE	MUMBAI	425
12	Nishant	XII	MALE	MUMBAI	295
32	Payal	X	FEMALE	DELHI	255
14	Arun	X	MALE	CHENNAI	365
21	Sanjey	XII	MALE	CHENNAI	385
20	Anish	XI	MALE	COCHIN	315

3

- a) Write a Query to display how many students are there in each Class.
- b) Write a Query to display all the students who are from city “Delhi” and Gender is Male.
- c) Write a Query to display how many students are scored above 450.

OR

Explain the following:

- Commit
- b. Rollback To
- c. Save Point

## SECTION -D

31. Mr. Manish is new learner of python to CSV Connection concept. Explain What is the meaning of CSV file and write the method(s) for transferring data from python to CSV and CSV to Python.

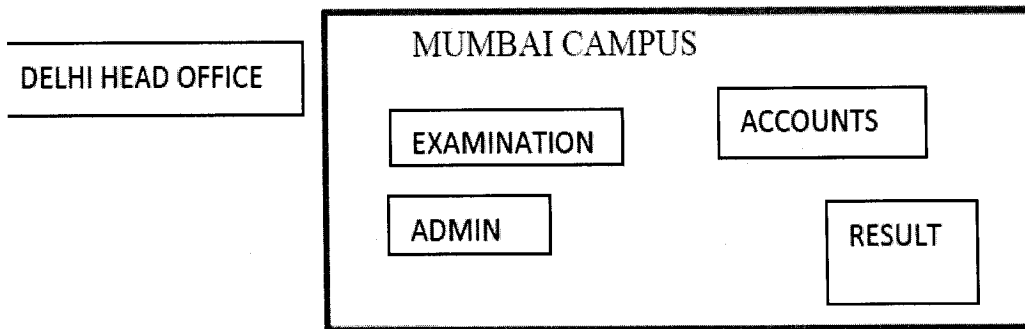
5

Write a Simple code to create the following Data Frame named as CSVDATA from EMPLOYEE.CSV.

32. M & M Computer services Ltd. is an international educational organization. It is planning to set up its India campus at Mumbai with its head office in Delhi. The Mumbai office campus has four main buildings-ADMIN, ACCOUNTS, EXAMINATION and RESULT.

You as a network expert have to suggest the best network related solutions for their problems raised in (i) to (v), keeping in mind the distances between the buildings and other given parameters.

5



Distances between various buildings:	
ADMIN TO ACCOUNTS	55 m
DELHI Head Office to MUMBAI campus	2150 Km
ADMIN TO RESULT	50 m
ACCOUNTS TO EXAMINATION	55 m
ACCOUNTS TO RESULT	50 m
EXAMINATION TO RESULT	45 m
ADMIN TO EXAMINATION	90 m

Number of Computers installed in various buildings	
Accounts	25
Examination	15
Admin	240
Result	10
Delhi Head Office	50

- Suggest and draw cable layout to efficiently connect various buildings within the MUMBAI campus for a wired connectivity.
- Which networking device will you suggest to be procured by the company to interconnect all the computers of various buildings of MUMBAI campus?
- Suggest Which Building you will keep the server? What is the reason?
- Which of the following will you suggest to establish the online face to face communication between the people in the ADMIN office of Mumbai campus and Delhi head office?  
1) Mail          2) Chat          3) Video conferencing          4) Telephone

33. Explain the following SQL functions using suitable examples.

- SUBSTR()
- SQRT()
- DAYOFMONTH()
- COUNT()
- TRIM()

5\*1=5

OR

Write a Query for the following statement(s)

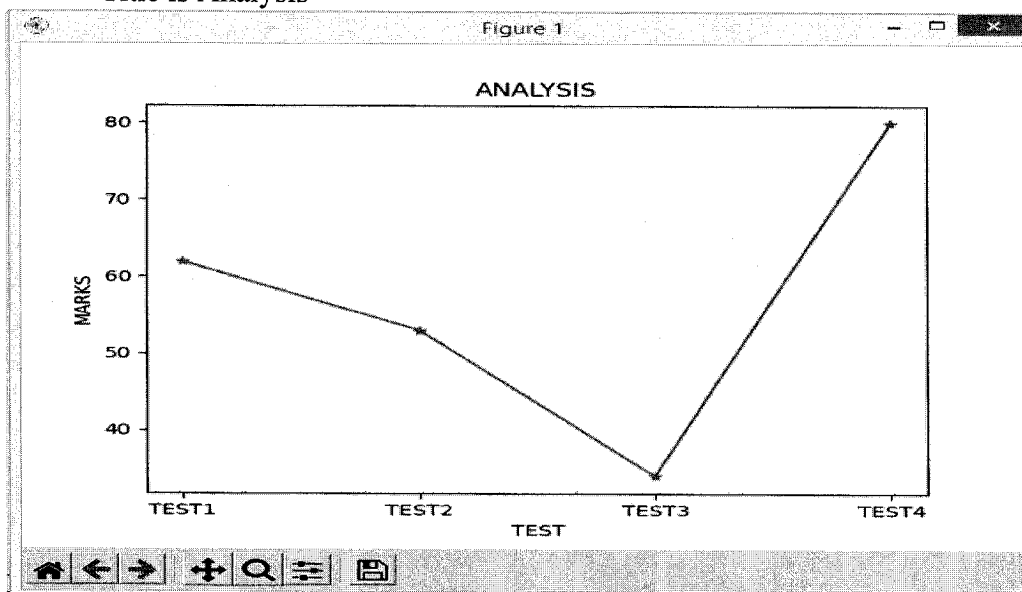
- Write a Query to display the Day number of the Date "2002-12-12 11:23:34"
- Write Query to find the power of 5 raised to 4
- Write a Query display the remainder 34 divided by 2
- Write a Query to remove the decimal point from the number 23.56
- Write a Query to convert the string "master mind" as upper case.

### SECTION-E

34. Write a Python program to create a LINE chart based on the following instructions:

- Data for creating chart is  
TEST=['TEST1','TEST2','TEST3','TEST4']  
MARKS=[62,53,34,80]
- X label is TEST  
Y label is Marks  
Title is Analysis

4



OR

Write a python program to plot a bar chart based on the given data to depict the changing weekly average temperature in CHENNAI for four weeks.

Week=[1,2,3,4]

Avg\_week\_temp=[34,42,38,40]

35. Ms.Dimple, a data analyst has designed the Data Frame EMPDATA that contains data about Employee's Salary. Write a python program to create the following dataframe and display all the details of employees whose salary is less than 2500.

4

	EMPNO	EMP_Name	SALARY
0	1	Allan	3420
1	2	Karnn	2415
2	3	Kumar	1490
3	4	Anisha	3400
4	5	Sanjey	5970

OR

Ms.Naima, a data analyst has designed the Data Frame EMPDATA that contains data about Employee's Salary. Write a python program to create the following dataframe and display all the details of Karan and Anisha.

	EMPNO	EMP_Name	SALARY
0	1	Allan	3420
1	2	Karnn	2415
2	3	Kumar	1490
3	4	Anisha	3400
4	5	Sanjey	5970

\*\*\*\*END OF THE QUESTION PAPER\*\*\*\*

