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**INDIAN SCHOOL MUSCAT
FINAL EXAMINATION 2022
INFORMATICS PRACTICES(065)**



CLASS :XII
DATE: 26-11-2022

TIME ALLOTTED : 3 HRS.
MAXIMUM MARKS: 70

GENERAL INSTRUCTIONS:

Read the Questions carefully before 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, _____ - is used to avoid duplicate values while displaying query result. 1
2. In Python _____ Command is used to display last five rows of a series object 'S', you may write: 1
 - i. S.Head() ii. S.Tail(5) iii. S.Head(5) iv. S.tail()
3. A mail or message sent to a large number of people indiscriminately without their consent is called _____. 1
4. Identify the odd one from the following: 1
 - i. Internet Explorer ii. File Explorer iii. Fire Fox iv. Google Chrome
5. _____ is the trail of data we leave behind when we visit any website (or use any online application or portal) to fill-in data or perform any transaction. 1
 - i. Offline phishing ii. Offline footprint iii. Digital footprint iv. Digital phishing
6. In MySql, _____ command is used to display the structure of the table. 1
7. Identify the domain name of the following URL: 1

URL – [http:// www.income.in/home.aboutus](http://www.income.in/home.aboutus).
8. In MySql, _____ is used for character pattern matching 1
 - i. Like ii. Character iii. Match iv. None
9. _____ -can be defined as the practical and holistic approach and the founding pillar of cutting down waste from our mother earth. 1
10. _____ is the process of gaining unauthorized access into computing device, or group of computer systems. 1

11. In Python _____ command is used to give a heading to a graph. 1
12. DML stands for 1
 (a) Data Maintenance Language (b) Data Manipulation Language
 (c) Data Manual Language (d) Data Multiple Language
13. The practice of taking someone else's work or ideas and passing them off as one's own is known as _____. 1
14. In MySql _____ is used to group all the similar records together. 1
 (a) Sort by (b) Order By (c) Group by (d) Arrange by
15. Legal term to describe the rights of a creator of original creative or artistic work is: 1
 i. Copyright ii. Copyleft iii. GPL iv. FOSS
16. _____ is a protocol used to transfer e-mail messages and attachments. 1

Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as

- i. Both A and R are true and R is the correct explanation for A
 ii. Both A and R are true and R is not the correct explanation for A
 iii. A is True but R is False
 iv. A is false but R is True
17. Assertion (A):- DataFrame has both a row and column index. 1
 Reasoning (R):- A DataFrame is a two-dimensional labelled data structure like a table of MySQL.
18. Assertion (A): - Internet cookies are text files that contain small pieces of data, like a username, password and user's preferences while surfing the internet. 1
 Reasoning (R):- To make browsing the Internet faster & easier, its required to store certain information on the server's computer.

SECTION- B

19. Anita, a database administrator needs to display Class(Field name is Class_sec) wise total number of students for class XII and XI . She is encountering an error while executing the following query: 2
- SELECT Class, COUNT (*) FROM STUDENT GROUP BY Class_sec WHERE class_sec='XII' OR Class_sec= 'XI';**
- Help her in identifying the reason of the error and write the correct query by suggesting the possible correction (s).
20. Predict the output of the following: 2
 import pandas as pd
 A=pd.Series(data=[76,45,55,40])
 print(A>55)
21. Write the full form of .csv. Write a method to read the content from the CSV file and method to transfer the data from python to CSV File. 2
22. How 'Where' clause is different from 'Having' Clause? Explain with an example. 2

23. Carefully observe the following code:

```
import pandas as pd
data1={'Qtr1':5000,'Qtr2':8000,'Qtr3':12000,'Qtr4': 18000}
data2={'A' :13000,'B':14000,'C':12000}
totSales={"Terms":data1,"Values":data2}
df=pd.DataFrame(totSales)
```

2

Answer the following Questions:

- a) Write a code to display all the indexes name from the data frame df.
b) Write the code to display all the column names from the data frame df.
24. Find the output of the following:
- ```
import pandas as pd
data1={'Qtr1':5000,'Qtr2':8000,'Qtr3':12000,'Qtr4': 18000}
data2={'A' :13000,'B':14000,'C':12000}
totSales={"Terms":data1,"Values":data2}
df=pd.DataFrame(totSales)
print(df)
print("=====")
print(df[2:3])
print(df[:,3])
```
25. What is the difference between ALTER and UPDATE command in mysql? Explain with an example.

2

### SECTION-C

26. Write a Python code to create a Data Frame (STUDENT) with (Rollno, Name, Marks) column headings from the list given below:

```
[[1,'Karan',100],[2,'Paul',95],[3,'Sam' ,96],[4,'Yuvraj',88]]
```

3

27. Based on table **STUDENT** given here, write suitable SQL queries for the following

| Roll No | Name     | Class | Gender | City   | Marks |
|---------|----------|-------|--------|--------|-------|
| 1       | Abhishek | XI    | M      | Agra   | 430   |
| 2       | Prateek  | XII   | M      | Mumbai | 440   |
| 3       | Sneha    | XI    | F      | Agra   | 470   |
| 4       | Nancy    | XII   | F      | Mumbai | 492   |
| 5       | Himnashu | XII   | M      | Delhi  | 360   |
| 6       | Anchal   | XI    | F      | Dubai  | 256   |
| 7       | Mehar    | X     | F      | Moscow | 324   |
| 8       | Nishant  | X     | M      | Moscow | 429   |

3

- a) Write a Query to display how many students are there in each city.  
b) Write a Query to display all the Male students name.  
c) Write a Query to display all the details whose mark is greater than 450.

OR

What is the difference between 'Group By' Clause and 'Order by' Clause? Explain with an example.

28. Consider the given DataFrame 'DATA1234':

|   | Name   | Salary |
|---|--------|--------|
| 0 | nancy  | 200    |
| 1 | sam    | 300    |
| 2 | martin | 400    |

3

Write suitable Python statements for the following:

- Add a new column called Deductions t with the following data: [100,30,50]
- Add a new column name as "Net Salary " as Salary- Deductions.

29. Find the output of the following:

- Select round(234.54,1)+round(34.67);
- Select mod(45,2)+10;
- Select upper(left("Welcomes",2));

3

30. Find the output for the following:

a)

```
>>> import pandas as p
>>> a=p.Series(["Van","Car","Lorry","Bus"])
>>> print(a.size)
```

b)

```
>> a=p.Series(["Van","Car","Lorry","Bus"])
>>> print(a)
>>> a.index.name="Index No"
>>> print(a)
```

3

c)

```
>>> import pandas as p
>>> a=p.Series(["Van","Car","Lorry","Bus"])
>>> print(a.empty)
```

#### SECTION -D

31. Write suitable SQL query for the following:

5\*1=5

- Display 5 characters extracted from 5th left character onwards from the string 'world leader-2022'.
- Display the position of occurrence of string 'WO' in the string 'WELCOME WORLD'.
- Round off the value 456.78 to two decimal place.
- Display the remainder of 75 divided by 5.
- Remove all the leading and trailing spaces from the String "\_\_\_ Test 2022\_\_" Assume \_ as the blank space)

OR

Explain the following SQL functions using suitable examples.

- LCASE()

- ii. MID()
- iii. TRUNCATE()
- iv. DAYNAME()
- v. POWER()

32. Write a python program to plot a line chart based on the given data to depict the changing monthly average temperature in Chennai for five months.

5

Months=['jan','feb','mar','apr']

Avg\_monthly\_Temp=[32,29,34,30]

Chart title = "Monthly Temperature"

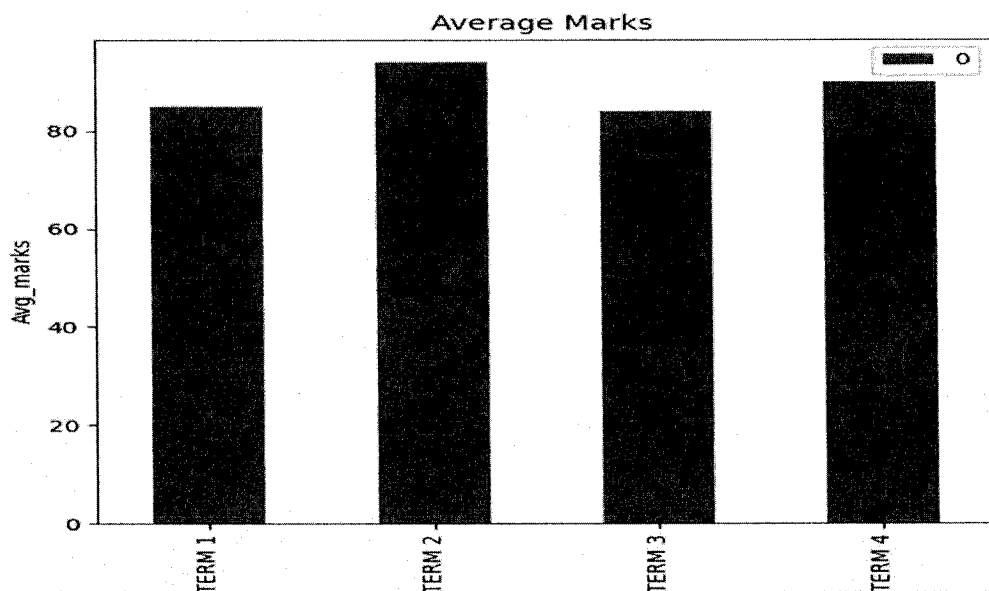
X axis Label="Months"

Y axis Label="Temp"

Marker="\*"

OR

Write a python program to create the following bar chart and save the chart as "Trail.jpg"



33. Mr. Rahul is new learner of python data frame concept. Explain the following methods / functions to him with an example.

2+1+2=5

- a) iteritems      (b) del      (c) iloc()

### SECTION-E

34. Sanjey, a database administrator has designed a database for a cloth. Help him by writing answers of the following questions based on the given table:

2+2=4

Table : cloth

| CCODE | CNAME   | SIZE | COLOR | PRICE | DOP        |
|-------|---------|------|-------|-------|------------|
| C001  | JEANS   | XL   | BLUE  | 990   | 2022-01-21 |
| C002  | T SHIRT | M    | RED   | 599   | 2021-12-12 |
| C003  | TROUSER | M    | GREY  | 399   | 2021-11-10 |
| C004  | SAREE   | FREE | GREEN | 1299  | 2019-11-12 |
| C005  | KURTI   | L    | WHITE | 399   | 2021-12-07 |

a) Write a Query to display all the Cname Whose name contains the character "s" any where.

b) Write a Query to display all cloth details whose price is not between 750 and 800.

35. Mr. Satish, a data analyst has designed the DataFrame MARKDATA that contains data about student's total marks. Write a python code to create the following dataframe and display all the details of Karan and Aishwarya.

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|   | Rollno | Name      | Total Marks |
|---|--------|-----------|-------------|
| 0 | 1      | Rhea      | 450         |
| 1 | 2      | paul      | 415         |
| 2 | 3      | Karan     | 449         |
| 3 | 4      | Aishwarya | 400         |
| 4 | 5      | Sanjey    | 471         |

Or

Mr. Sam, a data analyst has designed the DataFrame RESULTDATA that contains data about student's total marks. Write a python code to create the following dataframe and display all the details of students whose mark is more than 450.

|   | Rollno | Name      | Total Marks |
|---|--------|-----------|-------------|
| 0 | 1      | Eric      | 420         |
| 1 | 2      | Aaron     | 415         |
| 2 | 3      | Karan     | 469         |
| 3 | 4      | Aishwarya | 400         |
| 4 | 5      | Sanjey    | 471         |

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