MAHARAJA AGGARSAIN ADARSH PUBLIC SCHOOL
PreodicTest -1 2023-24
Class XII-Informatics Practices(065)

MM:40

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A has 10 questions carrying 0.5mark each.
4. Section B has 05 Very Short Answer type questions carrying 02 marks each.
5. Section C has 04Short Answer type questions carrying 03 marks each.
6. Section D has 02 questions carrying 04 marks each.
7. Section E has 03 questions carrying 05 marks each.

Section – A

(0.5x10=5)

Q1 The return type of POWER( ) function is
(a) String (b) Date (c) Numeric (d) None of these

Q2.The correct output of
SELECT TRIM (LEADING FROM '&&& India &&&&'); is
(a) India &&&& (b) Indie &&&& (c) && India &&&& (d) &&& India &&&

Q3.For given table 'emp' with following columns : eno, ename, sal, dept, designation
Select correct statement to display all records of 'emp' in descending order of ename and within ascending order of dept.
(a) SELECT*FROM emp ORDER BY ename, dept DESC;
(b) SELECT*FROM emp ORDER BY ename, ORDER BY dept DESC;
(c) SELECT*FROM emp ORDER BY ename DESC, dept;
(d) SELECT*FROM emp WHERE ORDER BY ename, dept DESC;

Q4.Which of the following is/are library function(s) used to load data from CSV files into DataFrame?
(a) read_csv() (b) to_csv() (c) Both (a) and (b) (d) None of these

Q5.What will be returned by the given query?
SELECT ROUND(153.669,2);
(a) 153.6 (b) 153.66 (c) 153.67 (d) 153.7

Q6.Given a Pandas Series called Sequences, the command which will display the first 4 rows is
(a) print(Sequences.head(4))
(b) print(Sequences.Head (4))
(c) print(Sequences.heads(4))
(d) print(Sequences.Heads (4))

Q7. Which amongst the following is not a Text function in MySQL? [1]
(a) UCASE() (b) RIGHT() (c) DAY() (d) LENGTH()

Q8.
In files, there is a key associated with each record which is used to differentiate among different records. For every file, there is atleast one set of keys that is unique. Such key is called
(a) Unique key (b) Prime attribute (c) Index key (d) Primary keyDirections (Q.9-10)Assertion and Reason based Questions.

Q9.
Assertion (A) Pandas is an open-source Python library which offers high performance, easy to use data structures and data analysis tools.
Reason (R) Professionals and developers are using the Pandas library in data science and machine learning.
(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.

Question 10.
Assertion (A) Elements of Series can be accessed using positional index.
Reason (R) Positional index value ranges from 1 to n, if n is the size of the series.
(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are ture 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.

Section – B

Q11.The Python code written below has syntactical errors. Rewrite the correct code and underline the corrections made. [2]

```
Import pandas as pd
Emp = {'a' : 10000, 'b' : 15000, 'c' : 12000}
Sr = Pd.Series(Emp)
Print(sr)
```

Q12 A character expression name contains 'try yourself. Write a command to pick the following set of characters from it. [2]

(i) First 3 characters
(ii) From 3rd to 7th character [2]

Q13.Carefully observe the following code: Output

```
import pandas as pd
One={'P':5000,'Q':8000,'R':12000,'S': 18000}
Two={'A' :13000,'B':14000,'C':12000}
totSales={1:One,2:Two}
df=pd.DataFrame(totSales)
print(df)
```

Q14. Carefully observe the following code: [2]

```
import pandas as pd
One={'P':5000,'Q':8000,'R':12000,'S': 18000}
Two={'A' :13000,'B':14000,'C':12000}
totSales={1:One,2:Two}
df=pd.DataFrame(totSales)
print(df)
```

Answer the following:
(i) List the index of the DataFramedf
(ii) List the column names of DataFramedf.

Q15.Complete the given Python code to get the required output as: 16 [2]

```
Import numpy as np
data = [1, 4, 9, 16]
series_data = np.array(data)
print (series_data [____])
```

SECTION C

Q16 Write a small Python code to create a DataFrame with headings (a and b) from the list given below. [3]

[[10, 20], [30, 40], [50, 60], [70, 80]]

Q17. aDataFramedf as shown below [3]

	A	B	C
0	21	12	69
1	45	45	84
2	23	86	70
3	17	33	78

!8.What will be the result of the following code statements?
(i) df['D']=np.NaN
(ii) df [' D'] = [23, 41, 32]
(iii) df ['D'] = [23, 41, 32, 9]

Q18.Consider the table EXAM given below. Write the queries for (i) to (iii). [3]

EXAM

No	Name	Stipend	Subject	Average	Divisi
1	Karan	400	English	68	Ist
2	Aman	680	Mathematics	72	Ist
3	Javed	500	Accounts	67	Ist
4	Bishakh	200	Informatics	55	IInd
5	Sugandha	400	History	35	IIIrd
6	Suparna	550	Geography	45	IIIrd

(i) To list the names of those students, who have obtained division as 1st in ascending order of Name.
(ii) To count the number of students, who have either Accounts or Informatics as Subject.
(iii) To display a report listing Name, Subject and annual Stipend received assuming that the Stipend column has monthly stipend.

Or

Reena is working with functions of MySQL.Explain her following
(i) What is the purpose of NOW( ) function?
(ii) How many parameters does it accept?What is the general format of its return type?
(iii) How is it different from date()

Q19.Give the output of the following commands. [3]
(i) mysql> SELECT TRUNCATE (200.91, 1);
(ii) mysql> SELECT LEFT ('Swati ', 4);
(iii) mysql>SELECT LENGTH ("Information");

Section – D

Q20.Tejasvi Sethi, a car dealer has stored the details of all cars in her showroom in a table CARMARKET. The table CARMARKET has attributes CARCODE which is a primary key, CARNAME, COMPANY, COLOR, COST (in lakh) of the car and DOM which is the Date of Manufacture of the car. [4]

Carcode	Carname	Company	Color	Cost	dom
C01	BALENO	SUZUKI	BLUE	5.90	2019-11-07
C02	INDIGO	TATA	SILVER	12.90	2020-10-15
C03	GLC	MERCEDES	WHITE	62.38	2020-01-20
C04	A6	AUDI	RED	58.55	2018-12-29
C05	INNOVA	TOYOTA	BLACK	32.82	2017-11-10
C06	WAGON-R	SUZUKI	WHITE	12.11	2016-11-11
C07	BREZZA	SUZUKI	GOLDEN	9.80	2016-10-03

Help her by writing answers of the following questions based on the given table.
(i) Display the carname along with the charges rounded off to 1 digit after decimal place.
(ii) Display the carname.name of the company in lower case of all cars whose year (of dom) is 2020.
(iii) Display the number of cars manufactured each year.
(iv) Display the carname, color and position of the character 'E' in the color of all the cars.

Q21.Mr. Ankit is working in an organisation as data analyst. He uses Python Pandas. He got a dataset of the passengers for the year 2010 to 2012 for January, March and December. His manager wants certain information from him, but he is facing some problems. [4]
Help him by answering few questions given below: Table: CARMARKET

	Year	Month	Passengers
0	2010	Jan	25
1	2010	Mar	50
2	2012	Jan	35
3	2010	Dec	55

4	2012	Dec	65

(i) What will be the output of the following statements?

(a) df.shape( )

(b) df.index=["AirIndia","Indigo","Spicejet","Jet","Emi rates"]

(ii) Write the code to get the following output;

	Month	Passengers
0	Jan	25
2	Jan	35

(iii) Predict the output of print (df[1 : 3])

Or

(Option for part (iii) only)

Suppose a DataFramedf contains information about student having columns rollno, name, class and section. Write the code to transpose DataFrame.

Section – E

Q23. Using the table **interiors** answer the following questions [5]

No	Itemname	Type	Dateofstock	Price	Discou
1	Red rose	Double Bed	23/02/02	32000	15
2	Soft touch	Baby Cot	20/01/02	9000	10
3	Jerry's home	Baby Cot	19/02/02	8500	10
4	Rough wood	Office Table	01/01/02	20000	20
5	Comfort zone	Double Bed	12/01/02	15000	20
6	Jerry look	Baby Cot	24/02/02	7000	19
7	Lion king	Office Table	20/02/02	16000	20
8	Royal tiger	Sofa	22/02/02	30000	25
9	Park sitting	Sofa	13/12/01	9000	15
10	Dine Paradise	Dining Table	19/02/02	11000	15
11	White wood	Double Bed	23/03/03	20000	20

(i) To show all information about the sofas from the Interiors table.

(ii) To list the Item name which are priced at more than 10000 from the Interiors table.

(iii) To list Item name and Type of those items, in which Dateofstock is be 22/01/02 from the Interiors table in descending order of Item name.

(iv) To display Item name and Dateofstock of items whose discount is more than 15.

(v) To insert a new row in the table with the following data:

12," True Indian", "Office Table",{28/03/03}, 15000,20

Or

Consider the table DOCTOR given below. Write commands in SQL for (i) to (iv) and answer the question for (v).

ID	DOCName	Department	DOJ	Gender	Salary
1	Amit Kumar	Orthopaedics	1993-02-12	M	35000
2	Anita Hans	Paediatrics	1998-10-16	F	30000
3	Sunita Maini	Gynaecology	1991-08-23	F	40000
4	Joe Thomas	Surgery	1994-10-20	M	55000
5	Gurpreet Kaur	Paediatrics	1999-11-24	F	52000

(i) Display the names and salaries of doctors in descending order of salaries.

(ii) Display names of each department along with total salary being given to doctors of that department.

(iii) Display the number of doctors in each department.

(iv) To display all the female doctors from the given data.

(v) Identify the primary key from the table DOCTOR.