MARKING SCHEME
CLASS XII SESSION: 2024-25
INFORMATICS PRACTICES (065)

Time allowed: 3 Hours **Maximum Marks:70**

Q No.	Section-A	Marks
1	True *(1 mark for correct answer)*	1
2	(B). Filter rows based on a specific condition *(1 mark for correct answer)*	1
3	(D). Router *(1 mark for correct answer)*	1
4	(A). DROP TABLE *(1 mark for correct answer)*	1
5	(D). Electronic devices that are no longer in use *(1 mark for correct answer)*	1
6	(B). df['column_name'] *(1 mark for correct answer)*	1
7	(D). line *(1 mark for correct answer)*	1
8	True *(1 mark for correct answer)*	1
9	(B). pd.read_csv('filename.csv') *(1 mark for correct answer)*	1
10	(A) Using copyrighted material without giving proper acknowledgement to the source *(1 mark for correct answer)*	1
11	(D). Rows *(1 mark for correct answer)*	1
12	(A). Star	1

	(1 mark for correct answer)		
13	(D). 5 *(1 mark for correct answer)*		1
14	(B). Phishing *(1 mark for correct answer)*		1
15	(B). Indices of the Series *(1 mark for correct answer)*		1
16	(B). P-2, Q-4, R-1, S-3 *(1 mark for correct answer)*		1
17	(D). Filtering data based on condition *(1 mark for correct answer)*		1
18	(C). Line plot *(1 mark for correct answer)*		1
19	(C). LAN *(1 mark for correct answer)*		1
20	(A). Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A) *(1 mark for correct answer)*		1
21	(D). Assertion (A) is False, but Reason (R) is True *(1 mark for correct answer)*		1
Q No.	**Section-B (7 x 2 = 14 Marks)**		**Marks**
22	(A)	A Series is a one-dimensional array containing a sequence of values of any data type (int, float, list, string, etc) which by default have numeric data labels starting from zero. We can imagine a Pandas Series as a column in a spreadsheet. An example of a series containing the names of students is given below: Index Value 0 Arnab 1 Samridhi 2 Ramit 3 Divyam *(1 mark for correct definition)*	2

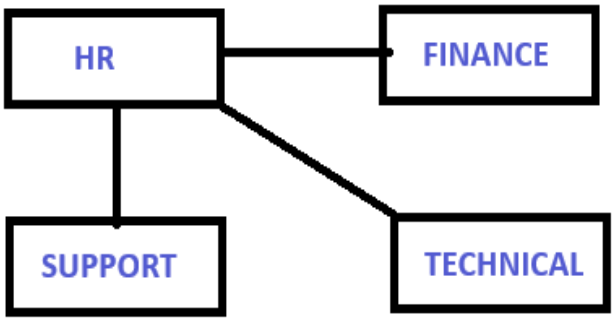
		(1 mark for correct example) **OR**	
	(B)	Library: A collection of modules providing functionalities for specific tasks. Pandas: Used for data analysis Matplotlib: Used for creating plots *(1 mark for correct definition)* *(1/2 mark each for correct use of each library)*	
23		**Intellectual Property Rights (IPR)** These are legal rights that protect the creations of the human intellect. The nature of these works can be artistic, literary or technical etc. **Importance in the digital world** These rights help prevent the unauthorized use or reproduction of digital content and ensure that creators are fairly compensated and incentivized for their original work. *(1 mark for correct definition)* *(1 mark for correct importance)*	2
24		I. SELECT SUBSTRING('Database Management System', 10, 6); *II.* SELECT INSTR('Database Management System', 'base'); *(1 mark for each correct query)*	2
25	(A)	The Internet is a vast network of interconnected computer networks facilitating global communication and data exchange. The World Wide Web (WWW), on the other hand, is a system of interlinked hypertext documents accessed via the Internet. *(1 mark for correct definition)* *(1 mark for correct difference)* **OR**	2
	(B)	Browser cookies: Small pieces of data stored on our digital devices by websites to remember information and personalize our experience. Advantage: Improve user experience by remembering preferences, like our preferred language and other settings. *(1 mark for correct definition)* *(1 mark for correct advantage)*	

26	Primary Key : A set of attributes that can uniquely identify each row in a table (relation). It must contain unique values and cannot be null. **How it differs from Candidate Key** There can be multiple Candidate Keys in a table (relation), but only one of them is selected as Primary Key. *(1 mark for correct definition)* *(1 mark for correct difference)*		2
27	Two health concerns due to excessive use of Digital Devices: a) Eye strain and vision problems. b) Musculoskeletal issues like neck and back pain. *(1 mark for each correct health concern)*		2
28	(A)	import pandas as pd D1 = {'Name': 'Rakshit', 'Age': 25} D2 = {'Name': 'Paul', 'Age': 30} D3 = {'Name': 'Ayesha', 'Age': 28} data = [D1, D2, D3] df = pd.DataFrame(data) print(df) Changes Made : i. Changed Pandas to pandas. ii. Corrected mismatched string quotation marks iii. Corrected the closing parenthesis in the list data. iv. Changed Dataframe to DataFrame. *(1/2 mark for each correct correction and underlining)*	2
		OR	
	(B)	import pandas as pd data = ['Chennai', 'Lucknow', 'Imphal'] indx = ['Tamil Nadu','Uttar Pradesh','Manipur'] s = pd.Series(data, indx) print(s) *(1/2 mark for each correct fill in the blank)*	

Q No	**Section-C (4 x 3 = 12 Marks)**		**Marks**
29	I. E-waste can release harmful substances like lead and mercury into the environment. *(1 mark for correct answer)* II. They can donate or sell it to a certified e-waste recycling center. *(1 mark for correct answer)* III. Recycling e-waste helps conserve natural resources and reduces pollution. *(1 mark for correct answer)*		3
30	(A)	import pandas as pd d1 = {'Product': 'Laptop', 'Price': 60000} d2 = {'Product': 'Desktop', 'Price': 45000} d3 = {'Product': 'Monitor', 'Price': 15000} d4 = {'Product': 'Tablet', 'Price': 30000} data = [d1, d2, d3, d4] df = pd.DataFrame(data) print(df) *(1 mark for correct import statement)* *(1 mark for correct list of dictionary)* *(1 mark for correct creation of DataFrame)*	3
		OR	
	(B)	import pandas as pd data = {'Russia':'Moscow','Hungary':'Budapest','Switzerland':'Bern'} s = pd.Series(data) print(s) *(1 mark for correct import statement)* *(1 mark for correct dictionary)* *(1 mark for correct creation of Series)*	
31	I.	CREATE TABLE STUDENTS (StudentID NUMERIC PRIMARY KEY, FirstName VARCHAR(20),	3

		LastName VARCHAR(10), DateOfBirth DATE, Percentage FLOAT(10,2)); *(2 mark for correct creation of Table)* *II.* INSERT INTO STUDENTS (StudentID, FirstName, LastName, DateOfBirth, Percentage) VALUES (1, 'Supriya', 'Singh', '2010-08-18', 75.5); *(1 Mark for correct insert Query)*	
32	(A)	I. SELECT DEPARTMENT, AVG(SALARY) FROM PAYROLL GROUP BY DEPARTMENT; II. SELECT DESIGNATION FROM PAYROLL ORDER BY SALARY DESC; III. SELECT EMP_NAME, DEPARTMENT FROM EMPLOYEE E, PAYROLL P WHERE E.EMP_ID=P.EMP_ID; *(1 mark for each correct query)* **OR**	3
	(B)	I. SELECT SPORT,SUM(Medals) FROM MEDALS GROUP BY SPORT; II. SELECT UPPER(Name) FROM ATHLETE WHERE COUNTRY = 'INDIA'; III. SELECT NAME, SPORT FROM ATHLETE A, MEDALS M WHERE A.AthleteID= M.AthleteID; *(1 mark for each correct query)*	
Q No.		**Section-D (2 x 4 = 8 Marks)**	**Marks**
33		I. matplotlib.pyplot II. books_read III. ylabel IV. Number of Books Read by Students *(1 mark for each correct answer)*	4

<table>
<tr><td>34</td><td>(A)</td><td>I. SELECT LOWER(TITLE) FROM BOOK;
II. SELECT MAX(PRICE) FROM BOOK;
III. SELECT LENGTH(TITLE) FROM BOOK;
IV. SELECT BCODE, PRICE FROM BOOK ORDER BY PRICE DESC;
(1 mark for each correct answer)
OR
(B) I.
<table><tr><td>LENGTH(MED_NAME)</td></tr><tr><td>11</td></tr><tr><td>11</td></tr><tr><td>7</td></tr></table>II.
<table><tr><td>MED_NAME</td></tr><tr><td>IBUPROFEN</td></tr></table>III.
<table><tr><td>MED_NAME</td></tr><tr><td>PARACETAMOL</td></tr><tr><td>COUGH SYRUP</td></tr><tr><td>INSULIN</td></tr></table>IV.
<table><tr><td>max(DEL_DATE)</td></tr><tr><td>2023-06-15</td></tr></table>(1 mark for each correct answer)</td><td>4</td></tr>
<tr><td>Q No.</td><td colspan="2">Section-E (3 x 5 = 15 Marks)</td><td>Marks</td></tr>
<tr><td>35</td><td colspan="2">I. The server should be installed in the HR department as it has the most number of computers.
II. Star topology</td><td>5</td></tr>
</table>



III. Switch/Hub

IV. WAN (Wide Area Network) will be created as the offices are located in different cities.

V. A dynamic website is recommended as it can display the dynamic performance data (which differs from employee to employee) of each employee.

(1 mark for each correct answer)

36

I. print(df.head(2))

II. print(df['Title'])

III. df = df.drop('Rating', axis=1)

IV. print(df.loc[2:4,'Title'])

V. df.rename(columns={'Title':'Name'}, inplace=True)

(1 mark for each correct answer)

5

37

(A)

I. SELECT AVG(test_results) FROM Exams;

II. SELECT RIGHT(registration_number, 3) FROM Vehicles;

III. SELECT TRIM(username) FROM Users;

IV. SELECT MAX(salary) FROM Employees;

V. SELECT COUNT(*) FROM Suppliers;

(1 mark for each correct query)

OR

(B)

I. SELECT ROUND(3.14159, 2);

II. SELECT MOD(125, 8);

III. SELECT LENGTH('NewDelhi');

IV. SELECT LEFT('Informatics Practices', 5);

V. SELECT TRIM(email) FROM Students;

(1 mark for each correct query)

5