Series JPR_PB/25-26/12/065/SET No.7

MARKING SCHEME

CLASS XII
INFORMATICS PRACTICES (065)

Time Allowed: 3 Hrs. **Maximum Marks:70**

Q No.	Section-A (21 x 1 = 21 Marks)	Marks
1	False (1 marks for correct answer)	1
2	(A) 1 (1 marks for correct answer)	1
3	(C) Plagiarism (1 marks for correct answer)	1
4	(B) df.read_csv() (1 marks for correct answer)	1
5	(C) IP Address (1 marks for correct answer)	1
6	(B) SUBSTRING() (1 marks for correct answer)	1
7	(D) All of these (1 marks for correct answer)	1
8	(C) 0 7.0 1 9.0 2 11.0 3 13.0 4 NaN dtype: float64 (1 marks for correct answer)	1
9	(A) 4 (1 marks for correct answer)	1

10	(B) Router (1 marks for correct answer)	1
11	(B) COUNT(column_name) (1 marks for correct answer)	1
12	(C) print (p_series.tail(4)) (1 marks for correct answer)	1
13	(C) Information Technology Act, 2000 (1 marks for correct answer)	1
14	(A) rdExam@ (1 marks for correct answer)	1
15	(B) df.loc[:2] (1 marks for correct answer)	1
16	(C) Star (1 marks for correct answer)	1
17	(C) LCASE(string/column_name) (1 marks for correct answer)	1
18	(A) pd.DataFrame(None) or (C) pd.DataFrame([]) (1 marks for each correct answer)	1
19	(D) SELECT Deptcode, avg(Salary) FROM Employee GROUP BY Deptcode HAVING count(*) > 6; (1 marks for correct answer)	1
20	(C) A is True, but R is False. (1 marks for correct answer)	1
21	(A) Both A and R are True, and R correctly explains A. (1 marks for correct answer)	1
Q No.	Section-B (7X2 = 14 Marks)	Marks
22	(A) 1. Dataframe can store heterogeneous elements. 2D Ndarrays is a table of homogeneous elements 2. It consumes more memory. it consumes lesser memory (1 mark for each correct difference) OR (B) 1. Series is a 1D data structure while DataFrame is a 2D data structure 2. Series is value mutable only while Dataframe value mutable as well	2

		as size mutable (1 mark for each correct difference)	
23	The e-waste management: i. Saves the environment and natural resources ii. Allows for recovery of precious metals iii. Protects public health and water quality iv. Saves landfill space (½ mark for each benefit)		2
24	0 False 1 True 2 False 3 True dtype: bool (½ mark for each correct output)		2
25	(A)	Browser add-ons, also known as extensions or plugins, are small software programs that enhance the functionality of web browsers. They allow users to customize and add features to their browsing experience. All modern and specifically desktop web browsers supports add-ons like Mozilla Firefox, Google Chrome, MS Edge,Opera,Safari etc. (1 Marks for definition of add-ons and 1 marks for name of browser which support add-ons)	2
		OR	
	(B)	Minimum two difference required between static and dynamic web page (1 marks for each correct difference between static and dynamic web pages)	
26	i. Select instr('Preoccupied','cup') ; ii. Select left('Preoccupied',4) ; (1markfor each correct answer of part (i),(ii))		2
27	Copyright protects original creative works like books and music by giving authors exclusive rights to reproduce and distribute their creations, while a patent protects inventions by granting inventors exclusive rights to make, use, and sell their novel inventions for a limited time. The primary difference is that copyright protects creative expression, and a patent protects technical innovation (1 marks for each correct difference)		2

28	(A)	[20,40,90,110,20,40,90,110] 0 40 1 80 2 180 3 220 (1 mark for each correct output) OR	2
	(B)	3 int64 (1 mark for each correct output)	

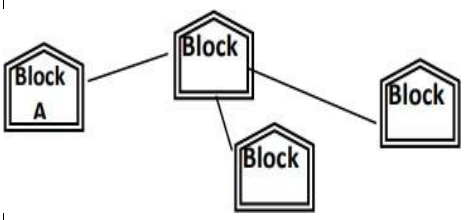
Q No		Section-C (4X3 = 12 Marks)	Marks
29	I.	Intellectual Property (IP) refers to creations of the mind like literary works, inventions etc. Intellectual Property Rights (IPR) are legal rights granted to creators for their original work.	3
	II.	Rahul's invention will be covered under Patent.	
	III.	Intellectual Property Rights (IPR) protect innovations by granting creators exclusive control over their inventions, preventing unauthorized use and ensuring financial rewards, which encourages further creativity and economic growth.	
		(1 mark for each correct answer)	
30	(A)	import pandas as pd data=[[1001,'IND-AUS',’2022-10-17’], [1002,'IND-PAK',’2022-1023’], [1003,'IND- SA' , ‘202210-30], [1004,'IND-NZ',’2022-11-18’]] df=pd.DataFrame (data, columns = ['MatchID', 'TEAMS', 'DATE']) (1 mark for each correct python statement (Student may give column names accordingly)	3
	(B)	OR city={'JAIPUR':7, ‘AJMER':2, ‘JODHPUR':3, 'UDAIPUR':2} kv=mypandas.Series(city) (1 mark for each correct python statement)	

31	a) create database BOOKS; (1 mark for correct query) b) create table bookdetail (BNo integer(4) primary key, BName varchar(20) Not Null, Author varchar(30), Price float(4,2)); (2 marks for correct query)	1+2=3

32	i) select COMPANY, MAX(Quantity) from STOCK group by COMPANY;
	ii) select YEAR(DOPURCHASE), MIN(Quantity) from STOCK group by year(DOPURCHASE);
	iii) select TYPE, count(TYPE) from STOCK group by TYPE;
	
	(1 mark for each correct statement)
	
	OR (only for part iii)
	
	WHERE CLAUSE : Definition + example ½ marks
	HAVING CLAUSE : Definition + example ½ marks
		3

Q No.	Section-D (2X4 = 8 Marks)	Marks
33	import matplotlib.pyplot as plt GAME=[“Cricket”, “Badminton”, “Hockey”, “Athletics”] NOOFGAMES=[20, 5, 15, 25] plt.bar(GAME, NOOFGAMES) plt.xlabel(“Game Name”) plt.ylabel(“No of Games”) plt.title(“No of Games Tally in State Level Sports”) plt.show() (½ mark for each correct statement) Python statement to save the chart: plt.savefig("GAME.jpg") (1 mark for the correct statement)	3+1=4

34	i) Select upper(name), upper(production) from movie; (Deduct ½ marks, if upper() is not used properly means separately) ii) Select * from movie where year(DORelease)=1989; iii) Select production, count(name) from movie group by production; (iv) Select Rating, count(name) from movie group by rating; (1 marks for each correct query) OR I **Name** | **LENGTH(Name)** Aryan | 5 Ayesha | 6 II. **lower(Name)** aryan III. **AVG(Marks)** 86.0000 IV. **Name** | **Marks** Ayesha | 90 Maria | 95 *(1 mark for each correct output)*	4

Q No.	Section-E (3X5 = 15 Marks)	Marks
35	(i)  (1 mark for correct explanation) (ii) The most suitable place / block to house the server of this organization would be Block C, as this block contains the maximum number of computers, thus decreasing the cabling cost for most of the computers as well as increasing the efficiency of the maximum computers in the network. (1mark for correct explanation) (iii) (a) For Layout1, since the cabling distance between Blocks A and C, and that between B and C are quite large, so a repeater each, would ideally be needed along their path to avoid loss of signals during the course of data flow in these routes. (1/2 mark for correct explanation) (b) A hub/switch each would be needed in all the blocks to inter connect the group of Cables from the different computers in each block. (1/2 mark for correct explanation) (iv) The most economical way to connect it with a reasonable high speed would be to use radio wave transmission, as they are easy to install, can travel long distances, and penetrate buildings easily, so they are widely used for communication, both indoors and outdoors. Radio waves also have the advantage of being omni directional, which is they can travel in all the directions from the source, so that the transmitter and receiver do not have to be carefully aligned physically. (1mark for correct explanation) (v) 1 mark for correct explanation of VoIP	5

36	i. print(df[‘Name’]) ii. df[‘Discount’]=200 iii. print(df.loc[2:3]) iv. df.drop(columns=[‘Department’],inplace=True) v. df=df.rename(index={‘Dr. Jeet ‘:’Dr. Jeet Ram’,’Dr. Vikram’:’Dr. Vikram Singh’}) (1 marks for each correct answer)	5

37	(A)
	i. select mid(‘IMPOSSIBLE’, 3, 4);
	ii. select INSTR(“LET’s GO to GOA”, “GO”);
	iii. select round(257.75, -1);
	iv. select mod(18, 5);
	v. select trim(passwd) from USER;
	
	(1 mark for each correct query)
	
	OR
	
	(B)
	i. SELECT MOD(13,5);
	ii. SELECT ROUND(12345.6789, -2);
	iii. SELECT MONTH(‘2023-07-23’);
	iv. SELECT INSTR('sarve bhavantu sukhinah’ , ’b’);
	v. SELECT RIGHT('sarve santu niramaya', 4);
	
	(1 mark for each correct query)
		5