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INDIAN SCHOOL SALALAH
FIRST TERM EXAMINATION – SEPTEMBER 2026



INFORMATICS PRACTICES-065

Class: XII**Date: 20/09/2026****Time: 3 HRS****Maximum Marks: 70***General Instructions:*

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 21 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 04 Short 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.
8. All programming questions are to be answered using Python Language only.

Section- A		
01	Bluetooth is an example of (a) MAN (b) WAN (c) PAN (d) SAN	1
02	Which of the following is a browser? (a) Google Chrome (b) Whatsapp (c) Twitter (d) All of them	1
03	Identify the domain name from the url : https://www.example.com/index.html (a) index.html (b) www.example.com (c) https (d) url and domain name are same	1
04	Write the output of the following Python code : import pandas as pd s = pd.Series([1, 2, 3, 4, 5, 6], index = ['A', 'B', 'C', 'D', 'E', 'F']) print(s[s%2]==0) (a) A 1 (b) B 2 (c) B 3 (d) B 2 C 3 D 4 D 4 D 4 E 5 F 5 F 6 F 6	1

	rollno 2 Name Pranshu Age 14 Marks 60.9 Class 12B dtype: object (a) print(df.iloc[1]) (b) print(df.loc[1]) (c) print(df.LOC[1]) (d) print(df.iloc(1))	
12	Identify the method used for labeling X-axis while drawing a graph in matplotlib.pyplot is : (a) plt.label() (b) plt.xlabel() (c) plt.ylabel() (d) plt.line()	1
13	Using Python matplotlib _____ can be used to display information as a series of data points. (a) bar chart (b) line chart (c) histogram (d) pie chart	1
14	Choose the correct output of the following MySQL query : Select pow(instr ('Commonwealth', 'on'), 2); (a) 64 (b) 9 (c) 16 (d) 25	1
15	Which MySQL function return the current date and time (a) time() (b) now() (c) date() (d) datetime()	1
16	Choose the correct output of the following MySQL query : Select round(248.867, -2); (a) 248.87 (b) 248.86 (c) 249 (d) 200	1
17	State True or False : TOTAL() is a multiple row function in MySQL	1
18	Which among the following is not a multiple row function in MySQL ? (a) SUM() (b) COUNT() (c) AVG() (d) TOTAL()	1
19	If a column MARKS in table EXAM consists of the following values (99, 87, 84, NULL, 88). What will be the output of the following code : SELECT count(MARKS) from EXAM; (a) 4 (b) NULL (c) 5 (d) Error	1
Q 20 and 21 are ASSERTION AND REASONING based questions. Mark the correct choice as a) Both A and R are true and R is the correct explanation for A b) Both A and R are true and R is not the correct explanation for A c) A is True but R is False d) A is false but R is True		
20	Assertion (A): To use the Pandas library in a Python program, one must import it. Reasoning (R): The only alias name that can be used with the Pandas library is pd.	1
21	Assertion (A): The Order By clause is used to sort the data in ascending or descending order based on the values in specified columns.. Reasoning (R): The Order By clause can be used with the SELECT statement.	1
Section- B		
22	Write the difference between static and dynamic web pages. OR Define Web Server and Web Browser	2

23	Write the difference between Add-ons and Plug-ins with the help of one example each.	2
24	Write a Python program to create the following Series S1 using a dictionary Amit 11000 Rajeev 7500 Dinesh 12500 Akshit 8000	2
25	Consider the following Series S1. S1 a 23 b 24 c 35 d 36 Write the output of the following (i) S1[: 2] * 10 (ii) S1['a' : 'c']	2
26	Consider the following DataFrame df Rno Name Class Section CGPA St1 101 Aman IX E 8.7 St2 102 Preeti X F 8.9 St3 103 Karthikey IX D 9.2 St4 104 Lakshmi X A 9.4 Write the Python pandas code for the following : (i) Add a new column 'Stream' with the following value : (Science, Commerce, Arts, Science) (ii) Add a new row with the following values : ('St5', 105, 'Mridula', 'X', 'F', 8.9'Arts'). Please note 'Str5' is the row index. OR Write the difference between accessing elements using loc and iloc ind DataFrame using a suitable example.	2
27	Write the difference between Single row functions and Multiple row functions with the help of two examples each.	2

28	Write the MySQL command to create the following table Salesman with the given constraints: Table Name : SALESMAN <table><tr><th>Field</th><th>Datatype</th><th>Constraint</th></tr><tr><td>SID</td><td>Char(5)</td><td>Primary key</td></tr><tr><td>Name</td><td>Varchar(25)</td><td>Not null</td></tr><tr><td>DOB</td><td>Date</td><td></td></tr><tr><td>Salary</td><td>Float</td><td></td></tr><tr><td>Area</td><td>Varchar(20)</td><td></td></tr></table>	Field	Datatype	Constraint	SID	Char(5)	Primary key	Name	Varchar(25)	Not null	DOB	Date		Salary	Float		Area	Varchar(20)		2
Field	Datatype	Constraint																		
SID	Char(5)	Primary key																		
Name	Varchar(25)	Not null																		
DOB	Date																			
Salary	Float																			
Area	Varchar(20)																			
Section- C																				
29	Consider the two following Series S1 and S2 <table><tr><td>S1</td><td>S2</td></tr><tr><td>a 35</td><td>x 20</td></tr><tr><td>b 23</td><td>a 10</td></tr><tr><td>c 44</td><td>p 25</td></tr><tr><td>d 21</td><td>d 15</td></tr></table> Write the output of the following (i) S1 + S2 (ii) S1.add(S2, fill_value = 5)	S1	S2	a 35	x 20	b 23	a 10	c 44	p 25	d 21	d 15	3								
S1	S2																			
a 35	x 20																			
b 23	a 10																			
c 44	p 25																			
d 21	d 15																			
30	Write a Python program to create the following DataFrame MARK using a dictionary with Series as values. <table><tr><th></th><th>NAME</th><th>PHY</th><th>CHEM</th></tr><tr><td>S1</td><td>ATUL</td><td>51</td><td>35</td></tr><tr><td>S2</td><td>ANIL</td><td>62</td><td>61</td></tr><tr><td>S3</td><td>ANUJ</td><td>45</td><td>46</td></tr></table>		NAME	PHY	CHEM	S1	ATUL	51	35	S2	ANIL	62	61	S3	ANUJ	45	46	3		
	NAME	PHY	CHEM																	
S1	ATUL	51	35																	
S2	ANIL	62	61																	
S3	ANUJ	45	46																	
31	a) Write the command in MySQL to do the following : (i) To create the substring ‘stal’ from the string ‘Crystalline’. (ii) To find the remainder when the values of the column qty is in table ITEM is divided by 4. (iii)To find the name of the day from dateofjoin column in EMPL table. OR b) Write the difference between where clause and having clause in MySQL.	3																		

32

Consider the following table STOCK with attributes

Field	Datatype	Constraint
PID	Char(5)	
PName	Varchar(5)	Not Null
Category	Char(6)	
Price	int	

3

Write MySQL commands for the following :

(i) Increase the size of PName from varchar(5) to varchar(25)

(ii) Add a new column Qty with datatype int

(iii) Make PID as the primary key

Section D

33

(a) Consider the following table and write MySQL queries for the questions given below :

Table Name : STUDENT

RegNo	SName	Stream	Optional	Marks
S1001	AKSHAT	SCIENCE	CS	99
S1002	HARSHIT	COMMERCE	IP	95
S1003	DEVIKA	HUMANITIES	IP	100
S1004	MANREEN	COMMERCE	IP	98
S1005	GAURAV	HUMANITIES	IP	82
S1006	SAURAV	SCIENCE	CS	NULL
S1007	BHASKAR	SCIENCE	CS	96

Write MySQL queries for the questions given below:

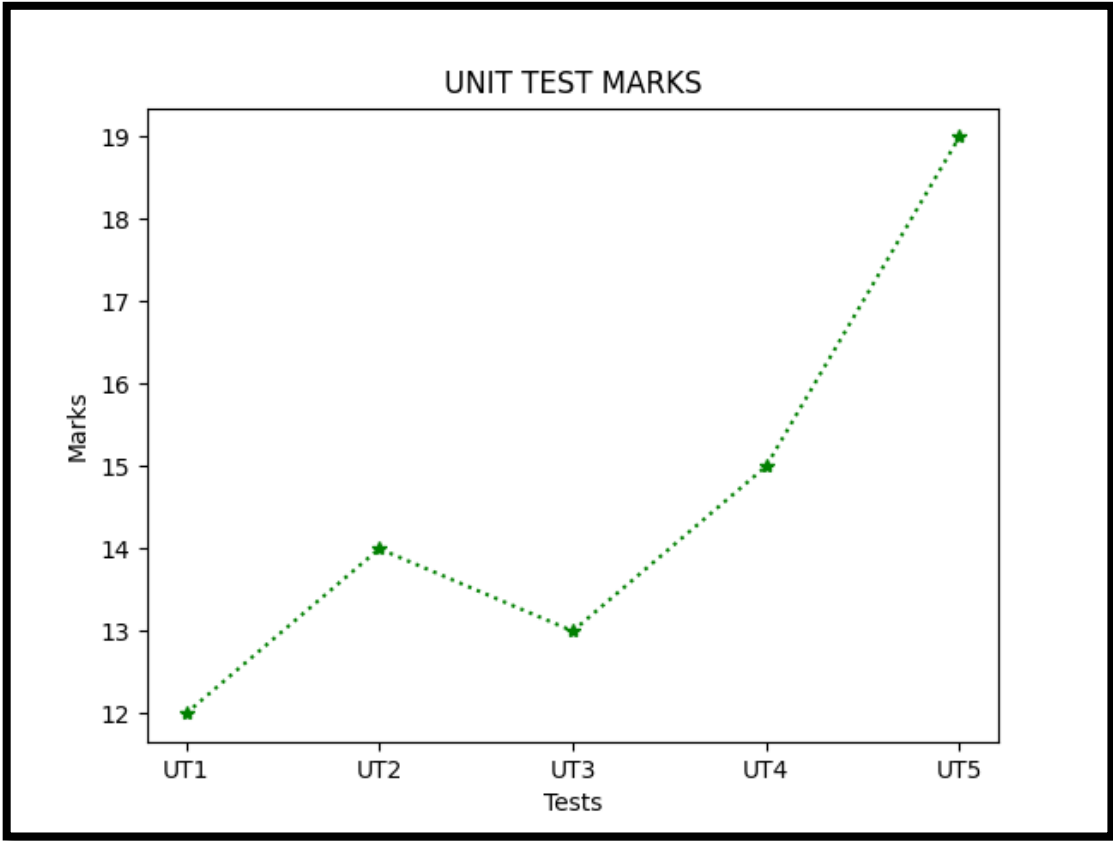
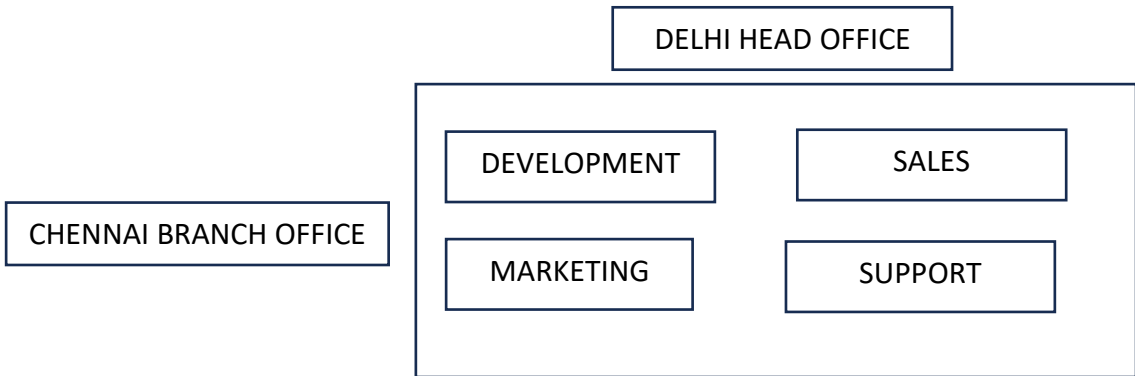
- Display the number of students in each stream.
- Display the minimum and maximum marks in COMMERCE and HUMANITIES
- Display the optional subject with number of students greater than 3.
- Display the records in alphabetical order of SNAME.

OR

(b) Consider the above table STUDENT and write the output of the questions given below :

- SELECT substr(SNAME, 4) from STUDENT where Optional = 'CS';
- SELECT sum(MARKS) from STUDENT where Stream = 'SCIENCE';
- SELECT left(RegNo, 3), right(Stream, 3) from STUDENT where

4

	Optional = 'CS'; (iv) SELECT RegNo, Sname, Optional from STUDENT where Optional = 'IP' order by SNAME;	
34	Write the Python program to draw the following graph  It uses dotted line, color of the line is green, width of the line is 1.5 and marker is star.	4
Section E		
35	XYZ Tech Solutions is expanding its operations and planning to establish two offices : Delhi head office and Chennai branch office. The Delhi head office will be divided into the following departments : Development, Marketing, Sales and Support. 	5

	Distance between blocks is given below					The number of computers in each block is as follows:
	BLOCK		DISTANCE			
	DEVELOPMENT TO MARKETING		90m			
	DEVELOPMENT TO SALES		110m			
	DEVELOPMENT TO SUPPORT		100m			
	MARKETING TO SALES		85m			
	MARKETING TO SUPPORT		95m			
	SALES TO SUPPORT		75m			
	DELHI TO CHENNAI		1500km			
36	BLOCK		NO OF COMPUTERS			5
	DEVELOPMENT		200			
	MARKETING		100			
	SALES		50			
	SUPPORT		30			
	CHENNAI OFFICE		60			
	Write answer for the questions given below :					
	I. Suggest the most suitable block in DELHI office to place the server.					
	II. Draw the most appropriate layout to connect the blocks in DELHI office.					
	III. Which device(s) will you suggest to connect all the computers in each department in DELHI office?					
IV. The company is considering establishing a network connection between its DELHI head office and CHENNAI branch office. Which type of network - out of LAN, MAN, WAN - will be created? Justify your answer.						
V. The company plans to develop an interactive website that will enable its employees to track their work progress after logging in. Would you recommend a static or dynamic website, and why?						
	Consider the following data frame book and answer the questions follows.					
		Title	Author	Price	Year	
	101	India Shining	Milan Sen	520	2024	
	102	India Tourism	Romit Ray	650	2023	
	103	Indian Culture	Dhruv Jain	270	2023	
	104	Indian Festivals	Kishan Roy	300	2022	

	(i) Print the first two rows of the data frame. (ii) Print Title and Author of the book index 103. (iii) Display the columns Title and Year. (iv) Display the Title and Price of the books published in the year 2023. (v) Increase the price of each book by 50 rupees.																															
37	(a) Consider the following table and write MySQL queries for the questions given below. Table Name : VEHICLE <table><tr><th>V_No</th><th>Type</th><th>Company</th><th>Price</th><th>Qty</th></tr><tr><td>AW125</td><td>Wagon</td><td>Maruti</td><td>250000</td><td>25</td></tr><tr><td>J0083</td><td>Jeep</td><td>Mahindra</td><td>4000000</td><td>15</td></tr><tr><td>S9090</td><td>SUV</td><td>Mitsubishi</td><td>2500000</td><td>18</td></tr><tr><td>M0892</td><td>Mini Van</td><td>Datsun</td><td>1500000</td><td>26</td></tr><tr><td>W9760</td><td>SUV</td><td>Maruti</td><td>2500000</td><td>18</td></tr></table> (i) Insert the following record : (R2409, Mini Van, Mahindra, 350000, 15) (ii) Increase the quantity of all vehicles under the company Maruti by 10. (iii) Display the details of the vehicles whose type ends with the character n. (iv) Display the vehicle number and Company where the Price is greater than 1000000 and in the descending order of company. (v) Delete all the records where the quantity is greater than 20. OR (b) Write MySQL queries for the following : (i) Calculate the remainder when 232 is divided by 5. (ii) Display the number of characters in the string ‘Informatics Practices’ (iii) Round off 104.43 to the nearest multiple of 10. (iv) Display 5 characters starting from the 3rd character from the string ‘Computer Science’. (v) Display the position of the starting index of the substring ‘for’ in the string ‘information is for knowledge’.	V_No	Type	Company	Price	Qty	AW125	Wagon	Maruti	250000	25	J0083	Jeep	Mahindra	4000000	15	S9090	SUV	Mitsubishi	2500000	18	M0892	Mini Van	Datsun	1500000	26	W9760	SUV	Maruti	2500000	18	5
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