

SHETH CN ENGLISH MEDIUM SCHOOL
PRACTICE PAPER - 3 (Term-2)
Computer Science (083)

STD: XII
Date:- 21/02/2022

Marks:-35
Time:-2 Hrs

Section –A Each question carries 2 marks			
Q. No	Part No.	Question	Mark s
1.		Write an algorithm for pop operation in stack	(2)
2.	(i)	Expand the following: POP, HTTP	(1)
	(ii)	Write one advantage of star topology over bus topology.	(1)
3.		What is the difference between degree and cardinality of atable? What is the degree and cardinality of the following table?	(2)
4.		Write the code to create the connection in which database's name is Python, name of host, user and password can taken by user. Also, print that connection.	(2)

5.	<p>Write the output of the queries (i) to (iv) based on the table, COURSE given below:</p> <p>Table: COURSE</p> <table border="1" data-bbox="401 338 1270 778"> <thead> <tr> <th>CID</th> <th>CNAME</th> <th>FEES</th> <th>STARTDATE</th> <th>TID</th> </tr> </thead> <tbody> <tr> <td>C201</td> <td>AGDCA</td> <td>12000</td> <td>2018-07-02</td> <td>101</td> </tr> <tr> <td>C202</td> <td>ADCA</td> <td>15000</td> <td>2018-11-15</td> <td>103</td> </tr> <tr> <td>C203</td> <td>DCA</td> <td>10000</td> <td>2018-10-01</td> <td>102</td> </tr> <tr> <td>C204</td> <td>DDTP</td> <td>9000</td> <td>2018-09-15</td> <td>104</td> </tr> <tr> <td>C205</td> <td>DHN</td> <td>20000</td> <td>2018-11-01</td> <td>101</td> </tr> <tr> <td>C206</td> <td>O LEVEL</td> <td>18000</td> <td>2018-07-25</td> <td>105</td> </tr> </tbody> </table> <p>(i) SELECT DISTINCT TID FROM COURSE; (ii) SELECT TID, COUNT(*), MIN(FEES) FROM COURSE GROUP BY TID HAVINGCOUNT(*)>1; (iii) SELECT COUNT(*), SUM(FEES) FROM COURSE WHERE STARTDATE< '2018-09-15'; (iv) SELECT CID, CNAME FROM COURSE ORDER BY CNAME DESC.</p>	CID	CNAME	FEES	STARTDATE	TID	C201	AGDCA	12000	2018-07-02	101	C202	ADCA	15000	2018-11-15	103	C203	DCA	10000	2018-10-01	102	C204	DDTP	9000	2018-09-15	104	C205	DHN	20000	2018-11-01	101	C206	O LEVEL	18000	2018-07-25	105	(2)
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6.	(i) Which command is used to delete a table in a database?	(1)																																			
	(ii) Define natural join.	(1)																																			
7.	<p>TABLE: FACULTY</p> <table border="1" data-bbox="394 1322 1265 1689"> <thead> <tr> <th>F_ID</th> <th>F_Name</th> <th>Hire_date</th> <th>Salary</th> </tr> </thead> <tbody> <tr> <td>102</td> <td>Amit</td> <td>12-10-1998</td> <td>12000</td> </tr> <tr> <td>103</td> <td>Nitin</td> <td>24-12-1994</td> <td>8000</td> </tr> <tr> <td>104</td> <td>Rakshit</td> <td>18-5-2001</td> <td>14000</td> </tr> <tr> <td>105</td> <td>Rashmi</td> <td>11-9-2004</td> <td>11000</td> </tr> <tr> <td>106</td> <td>Sulekha</td> <td>5-6-2006</td> <td>10000</td> </tr> </tbody> </table> <p>(a) Identify the degree and cardinality of the table. (b) Which field should be made the primary key? Justify your answer.</p>	F_ID	F_Name	Hire_date	Salary	102	Amit	12-10-1998	12000	103	Nitin	24-12-1994	8000	104	Rakshit	18-5-2001	14000	105	Rashmi	11-9-2004	11000	106	Sulekha	5-6-2006	10000	(2)											
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OR

Table: GAMES

GCode	GameName	Number	PrizeMoney	ScheduleDate
101	Carom Board	2	5000	23-Jan-2004
102	Badminton	2	12000	12-Dec-2003
103	Table Tennis	4	8000	14-Feb-2004
105	Chess	2	9000	01-Jan-2004
108	Lawn Tennis	4	25000	19-Mar-2004

Table: PLAYER

Pcode	Name	GCode
1	Nabi Ahmad	101
2	Ravi Sahai	108
3	Jatin	101
4	Nazneen	103
5	Anand	108

- (i) Which field will be considered as the foreign key as per the above tables.
- (ii) Identify the candidate key(s) from the table GAMES.

SECTION – B
Each question carries 3 marks

8.

Pramod has created a dictionary containing EMPCODE and SALARY as key value pairs of 5 Employees of Parthivi Constructions. Write a program, with separate user defined functions to perform the following operations:

- Push the keys (Employee code) of the dictionary into a stack, where the corresponding value (Salary) is less than 25000.
- Pop and display the content of the stack.

For example:

If the sample content of the dictionary is as follows:

(3)

		<p>EMP={"EOP1":16000, "EOP2":28000, "EOP3":19000, "EOP4":15000, "EOP5":30000}</p> <p>The output from the program should be: EOP4 EOP3 EOP1</p> <p style="text-align: center;">OR</p> <p>Aryan has a list containing 10 integers. You need to help him create a program with separate user defined functions to perform the following operations based on this list.</p> <ul style="list-style-type: none"> ● Traverse the content of the list and push the odd numbers into a stack. ● Pop and display the content of the stack. <p>For Example: If the sample Content of the list is as follows: Num=[31, 55, 76, 89, 21, 45, 76, 68] Sample Output of the code should be: 45 21 89 31</p>	
9.	(i)	<p>A table, PERSON is created with following attributes: P_Id LastName FirstName Address City</p> <p>Give the SQL command to insert a new row in the PERSONS table.</p>	(1)
	(ii)	Differentiate between ALTER and UPDATE commands in SQL	(2)
10.		<p>Write the queries for the following questions using the table Product with the following fields, under the database STORE. (P_ Code, P_Name, Qty, Price)</p> <p>(i) Create a database STORE</p> <p>(ii) Display the price of product having code as P06.</p> <p>(iii) Display the name of all products with quantity greater than 50 and price less than 500.</p>	(3)

Section C
Each question carries 4
marks

11.

Write queries (a) to (d) based on the tables **Sender** and **Recipients** given below:

(4)

Sender

SenderID	SenderName	SenderAddress	Sendercity
ND01	R Jain	2, ABC Appls	New Delhi
MU02	H Sinha	12 Newtown	Mumbai
MU15	S Jha	27/A, Park Street	Mumbai
ND50	T Prasad	122-K,SDA	New Delhi

Recipients

RecID	SenderID	RecName	RecAddress	recCity
KO05	ND01	R Bajpayee	5, Central Avenue	Kolkata
ND08	MU02	S Mahajan	116, A-Vihar	New Delhi
MU19	ND01	H Singh	2A, Andheri East	Mumbai
MU32	MU15	P K Swamy	B5, C S Terminals	Mumbai
ND48	ND50	S Tripathi	13, BI D Mayur Vihar	New delhi

- (a) To display the names of all Senders from Mumbai
- (b) To display the RecID, Sendername, SenderAddress, RecName, RecAddress for every Recipient
- (c) To display Recipient details in ascending order of RecName
- (d) To display number of Recipients from each city

12.	(i)	<p>Give two advantages and two disadvantages of Radiowave</p> <p style="text-align: center;">OR</p> <p>Define the following terms: Modem, Bluetooth</p>	(2)
	(ii)	<p>What is the difference between star topology and bus topology of network?</p>	(2)
13.		<p>Shiva Multi Tech Corporation (SMTC) has set up its new center at four offices for web based activities. The 4 blocks of buildings are as shown in the diagram below:</p> <p style="text-align: center;"> Block A Block C </p> <p style="text-align: center;"> Block B Block D </p> <p style="text-align: center;">Center to center distances between various blocks</p> <p style="text-align: center;">Number of Computers</p> <p>(a) Which of the following devices will be suggested by you to connect each computer in each of the block? • Gateway • Switch • Modem .</p> <p>(b) Suggest the most suitable place (i.e. block) to house the server of this organisation with a suitable reason.</p> <p>(c) What will be the best possible connectivity out of the following, you will suggest to connect the new setup of offices in Bangalore with its London based office? • Infrared • Satellite Link • Ethernet Cable</p> <p>(d) Company is planning to connect its Block in Hyderabad which is more than 20 km. Which type of network will be formed?</p>	(4)