

YESWECS

PRACTICE PAPER - 4

Std : XII(CBSE)

Marks : 35

Date : 04.06.2022

COMPUTER SCIENCE

Time : 2 hours.

General Instructions :

1. The question paper is divided into 3 Sections - A, B and C
2. Section A consist of 7 Questions (1-7). Each question carries 2 marks.
3. Section B consist of 3 Questions (8-10). Each question carries 3 marks.
4. Section C consist of 3 Questions (11-13). Each question carries 4 marks.
5. Internal choices have been given for question numbers – 7, 8 and 12.

Section-A																					
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Q. No	Part No.	Question	Marks																		
1.		Difference between Stack and Queue.	(2)																		
2.	(i)	Expand the following: WiMAX , GPRS	(1)																		
	(ii)	Out of the following, which is the cheapest wired and wireless medium of transmission? Infrared, coaxial cable, optical fibre, microwave, twisted pair cable, Satellite	(1)																		
3.		Differentiate between where and having conditions.	(2)																		
4.		A resultset is extracted from the database using the cursor object (that has been already created) by giving the following statement. Mydata=cursor.fetchone() (a) How many records will be returned by fetchone()method? (b) What will be the datatype of Mydata object after the given command is executed?	(2)																		
5.		Answer the questions (a) to (d) on the basis of the following tables SHOP and ACCESSORIES. Table: SHOP <table border="1"><thead><tr><th>Id</th><th>SName</th><th>Area</th></tr></thead><tbody><tr><td>S001</td><td>ABC computronics</td><td>CP</td></tr><tr><td>S002</td><td>All Infotech Media</td><td>GK II</td></tr><tr><td>S003</td><td>Tech Shop</td><td>CP</td></tr><tr><td>S004</td><td>Geeks Tecno Soft</td><td>Nehru Place</td></tr><tr><td>S005</td><td>Hitech Tech Store</td><td>Nehru Place</td></tr></tbody></table>	Id	SName	Area	S001	ABC computronics	CP	S002	All Infotech Media	GK II	S003	Tech Shop	CP	S004	Geeks Tecno Soft	Nehru Place	S005	Hitech Tech Store	Nehru Place	(2)
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Table: ACCESSORIES			
No	Name	Price	Id
A01	Mother Board	12000	S01
A02	Hard Disk	5000	S01
A03	Keyboard	500	S02
A04	Mouse	300	S01
A05	Mother Board	13000	S02
A06	Keyboard	400	S03
A07	LCD	6000	S04
T08	LCD	5500	S05
T09	Mouse	350	S05
T10	Hard Disk	4500	S03

Write the output for the following SQL queries:

- SELECT DISTINCT NAME FROM ACCESSORIES WHERE PRICE >= 5000;
- SELECT AREA, COUNT(*) FROM SHOPPE GROUP BY AREA;
- SELECT COUNT (DISTINCT AREA) FROM SHOPPE;
- SELECT NAME, PRICE*0.05 DISCOUNT FROM ACCESSORIES WHERE SNO IN ('S02', 'S03');

6. (i) Write the syntax used to create a database? (1)

(ii) What are the commands available in DDL? (1)

7. Consider the following tables CARDEN and CUSTOMER and answer the following questions: (2)

Table : CARDEN

Ccode	CarName	Make	Colour	Capacity	Charges
501	A-Star	Suzuki	RED	3	14
503	Indigo	Tata	SILVER	3	12
502	Innova	Toyota	WHITE	7	15
509	SX4	Suzuki	SILVER	4	14
510	C Class	Mercedes	RED	4	35

Table : CUSTOMER

Code	Cname	Ccode
1001	Hernant Sahu	501
1002	Raj Lal	509
1003	Feroza Shah	503
1004	Ketan Dhal	502

- What is the degree and cardinality of CUSTOMER table?
- Mention the Primary and Alternate keys of CARDEN table.

OR

- Identify the foreign key from the CUSTOMER table.
- What will be degree and cardinality after Cartesian product of CUSTOMER and CARDEN tables?

Section-B																								
Each question carries 3 marks																								
8.		<p>Write a function in python, <i>Push(Stu)</i> and <i>MakePop(Stu)</i> to add a new student and delete student from a List of Stu contain rollno, Sname and Class as list, considering them to act as push and pop operations of the Stack data structure</p> <p style="text-align: center;">OR</p> <p>Write a program to implement a stack for these book-details (book no, book name). That is, now each item node of the stack contains two types of information –a book no and its name. Just implemented push and display operations.</p>	(3)																					
9.	(i)	<p>While creating table 'customer', Rahul forgot to add column 'price'. Which command is used to add new column in the table. Write the command to implement the same.</p>	(1)																					
	(ii)	<p>Categorize following commands into DDL and DML commands? CREATE , ALTER, DROP, INSERT, UPDATE, DELETE</p>	(2)																					
10.		<p>Aarthi has to create a table named TRAVEL in the database to store the records of various travels. The table TRAVEL has the following structure:</p> <p>Table: TRAVEL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">FIELD NAME</th> <th style="width: 33%;">DATA TYPE</th> <th style="width: 33%;">REMARKS</th> </tr> </thead> <tbody> <tr> <td>CNO</td> <td>INTEGER</td> <td>PRIMARY KEY</td> </tr> <tr> <td>CNAME</td> <td>CHAR(30)</td> <td></td> </tr> <tr> <td>TRAVELDATE</td> <td>DATE</td> <td></td> </tr> <tr> <td>KM</td> <td>INTEGER</td> <td>NOT NULL</td> </tr> <tr> <td>NOP</td> <td>INTEGER</td> <td></td> </tr> <tr> <td>VCODE</td> <td>VARCHAR(10)</td> <td></td> </tr> </tbody> </table> <p>Help her to complete the task by suggesting appropriate SQL commands.</p>	FIELD NAME	DATA TYPE	REMARKS	CNO	INTEGER	PRIMARY KEY	CNAME	CHAR(30)		TRAVELDATE	DATE		KM	INTEGER	NOT NULL	NOP	INTEGER		VCODE	VARCHAR(10)		(3)
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Section-C																								
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11.		Write SQL queries for (a) to (d):	(4)																					

		Table: Applicants				
ID	Name	Course	Phone			
1	Ravi	BCA	4210716			
2	Rita	MBA	215611			
3	Sunil	MCA	321157			
4	Kumar	BCA	512771			

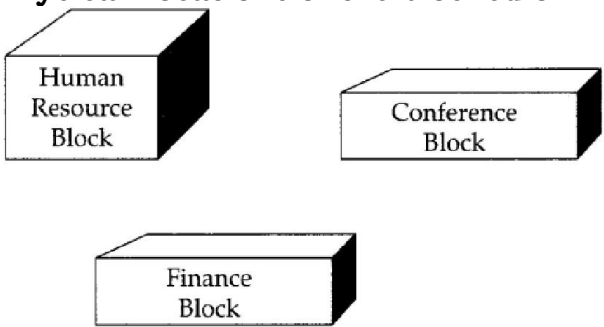
Table: Courses		
Name	Duration	Fee
MBA	2 year	40,000
MCA	3 year	70,000
BCA	3 year	20,000

a. To display name, fee, gender, joinyear about the applicants, who have joined before 2010.

b. To display names of applicants, who are paying fee more than 30000.

c. To display names of all applicants in ascending order of their joinyear.

d. To display the year and the total number of applicants joined in each YEAR from the table APPLICANTS.

12.	(i)	Give two advantages and two disadvantages of Tree topology OR Define the following terms: Web browser, DNS	(2)
	(ii)	Define the following terms: Bandwidth , Transmission Medium	(2)
13.		Trine Tech Corporation (TTC) is a professional consultancy company. The company is planning to set up their new offices in India with its hub at Hyderabad. As a network adviser, you have to understand their requirement and suggest them the best available solutions. Their queries are mentioned as (i) to (iv) below. Physical Locations of the blocked of TTC 	(4)

Block to Block distances (in Mtrs.)

Block (From)	Block (To)	Distance
Human Resource	Conference	110
Human Resource	Finance	40
Conference	Finance	80

Expected number of computers to be installed in each block.

Block	Computers
Human Resource	25
Finance	120
Conference	90

- a. What will be the most appropriate block, where TTC should plan to install their server?
- b. Draw a block to cable layout to connect all the buildings in the most appropriate manner for efficient communication.
- 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:
 - Satellite Link
 - Infrared
 - Ethernet Cable
- d. Which of the following device will be suggested by you to connect each computer in each of the buildings:
 - Switch
 - Modem
 - Gateway