

Revision Exam Question Paper -SET-4

XII-COMPUTER SCIENCE (083)

Time allowed: 2 hours

Maximum Marks: 35

General instructions:

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

(SECTION A)

Each question carries 2 marks

- Q1. Differentiate between underflow and overflow in stacks (2)
- Q2. (i) Expand the following: (1)
- ARPANET, NSFNET**
- (ii) What will be units to measure the size of high quality digital photograph? (1)
- Q3. Which SQL logical operator is used to compare a value to similar values using wildcard operators? (2)
- Which SQL logical operator reverses the meaning of the logical operator with which it is used?
- Q4. What is the datatype of the result set extracted from the database using the cursor object when we use the following: (2)
- a) fetchone() method b) fetchall() method
- Q5. Write the output of the queries (a) to (d) based on the table country, given below: (2)

Code	Name	Continent	Surface area	Population	Life expectancy
AFG	Afghanistan	Asia	652090	22720000	46
AGO	Angola	Africa	1246700	12878000	39
AIA	Anguilla	North America	96	8000	76
ALB	Albania	Europe	28748	3401200	72
AND	Andorra	Europe	468	78000	84
ARE	United Arab Emirates	Asia	83600	2441000	74
ARG	Argentina	South America	2780400	37032000	75

ARM	Armenia	Asia	29800	3520000	66
ASM	American Samoa	Oceania	199	68000	75
ATA	Antarctica	Antarctica	13120000	0	Null

- SELECT min(Population) FROM country;
- SELECT max(SurfaceArea) FROM country;
- SELECT avg(LifeExpectancy) FROM country Where Name Like "Ang%";
- SELECT Code FROM country Where country.Name=country.Continent;

- Q6.** (i) Which clause sorts the final data?
(ii) Write the Syntax for Equi- join and Natural Join

- Q7.** Consider the table Travel given below:

TABLE: TRAVEL

CNO	CNAME	TRAVELDATE	KM	TAXI_CODE	NOP
101	Randeep Singh	2018-11-07	200	T01	12
102	Sharad Bali	2018-12-21	120	T04	4
105	Sangeeta M	2019-04-25	450	T01	15
103	Manish Nagpal	2019-01-29	280	T02	5
107	Veronica Masih	2019-03-12	365	T04	2
104	Dinesh Hoon	2019-10-28	200	T05	4
106	Ramita Malik	2019-03-12	100	T01	20

- Identify the degree and cardinality of the table.
- Which field should be made the primary key? Justify your answer.

SECTION – B

Each question carries 3 marks

- Q8.** Jiya has a list containing 8 integers. You need to help her create a program with two user defined functions to perform the following operations based on this list.
- Traverse the content of the list and push those numbers into a stack which are divisible by both 5 and 3.
 - Pop and display the content of the stack.

For example the following list:

[5,15,21,30,45,50,60,75]

And should display:

75 60 45 30 15

- Q9.** (i) Write a SQL statement to rename the table Student to Student_new(considering this table does not already exist in the database)
(ii) Differentiate between DDL and DML Commands.
- Q10.** The database MavenAdmin already has a table DEPARTMENTS, write the SQL statements to add a table named HR_jobs with the following structure.

Field	Data Type	Remarks
JOB_ID	VARCHAR(10)	Primary Key
JOB_TITLE	VARCHAR(35)	Not Null
DEPARTMENT_ID	VARCHAR(10)	Foreign Key for DEPARTMENT_ID in DEPARTMENTS Table
EXPERIENCE	INT	
MIN_SALARY	DECIMAL(6,0)	
MAX_SALARY	DECIMAL(6,0)	

Section C

Each question carries 4 marks

- Q11.** Golden Rainbow school has a Schooladmin Database with the following Tables. Using the information given in the 2 tables write the SQL query for a)-d)

Table: Students

StudentID	Name	DOB	City	Sport	Email
1211	Anvi	2005-10-06	Chandigarh	Tennis	anvi@csmail.com
1212	Ananya	2005-09-11	Panchkula	TT	ana@csmail.com
1213	Bisman	2005-07-01	Mohali	Cricket	bisn@csmail.com
1214	Bani	2004-12-11	Chandigarh	TT	bani@csmail.com
1215	Brie	2005-03-16	Chandigarh	Squash	brie@csmail.com
1216	Diya	2006-07-11	Panchkula	Tennis	diya@csmail.com
1217	Fiza	2005-07-21	Mohali	Cricket	fiza@csmail.com
1218	Gauri	2004-12-30	Chandigarh	TT	Gari@csmail.com

Table: records

StudentID	Unit1	Unit2	Term1	Term2
1211	23	24	37	39
1212	21	21	32	33
1213	25	24	38	39
1214	22	23	30	31
1215	21	24	37	39
1216	24	21	32	33
1217	23	24	38	39
1218	21	23	30	31

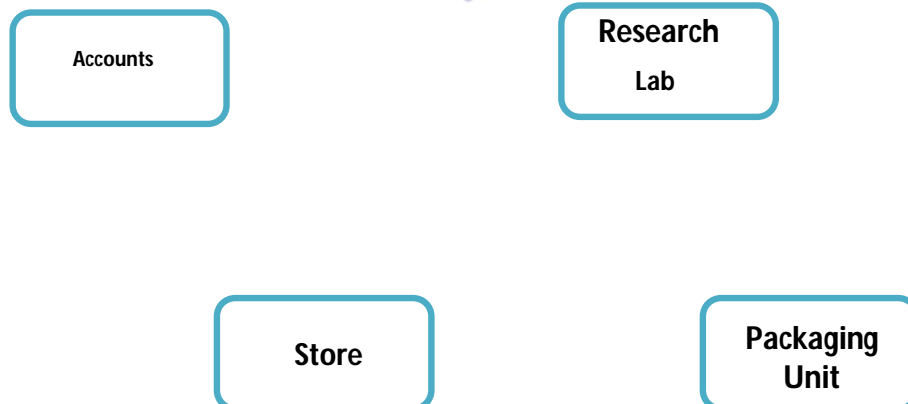
- Write an SQL statement to display the StudentID, Name and Email of the students from Chandigarh who play TT.
- Write an SQL statement to display the Name and marks of Unit1 and Unit2 for those students who scored above 44 marks after adding Unit1 and Unit2.
- Write an SQL statement to display the Name and the total marks for the students from Mohali.
- Write an SQL statement to display the average of the total marks of the students.

Q12. (i) Define the following terms: (4)

Web Browser, Web server

(ii) How is a Gateway different from a Repeater?

Q13. HerbalCity Pharma is a pharmaceutical company that has set up a new unit in Himachal Pradesh. They have the following blocks on the campus. (4)



The distance between various blocks is as follows:

Accounts to Research Lab	55 m
Accounts to Store	150 m
Store to Packaging Unit	160 m
Packaging Unit to Research Lab	60 m
Accounts to Packaging Unit	125 m
Store to Research Lab	180 m

Number of Computers

Accounts	35
Research Lab	110
Store	25
Packaging Unit	70

As a network expert, provide the best possible solutions for the following:

- i) Suggest a cable layout of connections between the blocks.
- ii) Suggest the most suitable block to house the server of this organization.
- iii) Suggest the placement of the following device with justification:
 - a) Repeater
 - b) Hub/Switch
- iv) Suggest a system (hardware/software) to prevent unauthorized access to or from the network.