PRATAP PUBLIC SCHOOL, SECTOR 6, KARNAL
Pre – Board Term II Examination (2021-2022)

Class – XII
Subject – Computer Science (083)

M.M. - 35
M.T. – 2 Hours

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

1. Give any two characteristics of overflow in stacks. (2)

2. (i) Expand the following: (1)
URL , SMTP
(ii) Out of the following, which is the slowest wired and wireless medium of (1)
transmission?
Infrared, Coaxial cable, Optical fiber, Microwave, Ethernet cable , Twisted cable

3. Differentiate between char(n) and varchar(n) data types with respect to databases (2)
with example.

4. A result set is extracted from the database using the cursor object (that has (2)
been already created) by giving the following statement.
Myd=cursor.fetchall()
(a) How many records will be returned by fetchall() method?
(b) What will be the datatype of Myd object after the given command is
executed?

5. Write the output of the queries (a) to (d) based on the table, Crockery
given below: (2)

Table: CROCKERY

FID	NAME	DATEOFPURCHASE	COST	DISCOUNT
B001	CUP	03-Jan-2018	45000	10
T010	PLATE	10-Mar-2020	51000	5
B004	SPOON	19-Jul-2021	22000	0
C003	GLASS	30-Dec-2016	12000	3
T006	KNIFE	17-Nov-2019	15000	12
B006	TRAY	01-Jan-2021	28000	14

(a) SELECT SUM(DISCOUNT) FROM
CROCKERY WHERE COST>15000;
(b) SELECT MAX(DATEOFPURCHASE) FROM
CROCKERY;
(c) SELECT * FROM CROCKERY
WHERE DISCOUNT>5 AND FID LIKE "T%";
(d) SELECT DATEOFPURCHASE FROM CROCKERY WHERE NAME IN
("GLASS ", " PLATE ");

6. (i) Which command is used to view the list of database? (1)
(ii) Give one point of difference between an equi-join and non equi-join. (1)

1

7. Consider the table, TVSHOWDETAILS given below (2)

Table: TVSHOWDETAILS

SHOWID	TITLE	LANGUAGE	RATING	PLATFORM
S001	SEINFELD	Korean	5	YouTube
S004	CHEERS	Japanese	4	Hora
S010	THE MARY TYLER	Arabic	3	YouTube
S011	THE TWILIGHT ZONE	English	4	Starz
S015	SEINFELD	Arabic	5	Hora
S020	THE SOPRANOS	English	4	Starz

(a) Identify the degree and cardinality of the table.
(b) Which field should be made the primary key? Justify youranswer.

OR

(a) Identify the candidate key(s) from the table **TVSHOWDETAILS**.
(b) Consider the table **SCHEDULE** given below:

Table: SCHEDULE

SLOTID	MOVIEID	TIMESLOT
S001	M010	10 AM to 12 PM
S002	M020	2 PM to 5 PM
S003	M010	6 PM to 8 PM
S004	M011	9 PM to 11 PM

Which field will be considered as the foreign key if the tables **TVSHOWDETAILS** and **SCHEDULE** are related in a database?

SECTION – B
Each question carries 3 marks

8. Rajan has created a dictionary containing **Medicine Names** and **Cost** as key value (3) pairs of 10 medicines. Write a program, with separate user defined functions to perform the following operations:
- Push the keys (name of the medicine Name given) of the dictionary into a stack, where the corresponding value (Cost) is greater than 750.
- Pop and display the content of the stack.

OR (3)

Amitabh has a list containing 6 integers. You need to help him create a program with separate user defined functions to perform the following operations based on this list.
- Traverse the content of the list and push the even numbers into a stack.
- Pop and display the content of the stack.

For Example:
If the sample Content of the list is as follows:
N=[100,101,102,103,104,106]

Sample Output of the code should be:
106, 104, 102, 100

9.

(i) A table, **SHIRT** has been created in a database with the following fields: (2)
SHIRTCODE, BRANDNAME, QTY, PRICE
Give the SQL command to add a new field, **DISCOUNT** (of type Integer) to the
SHIRT table.

(ii) Categorize following commands into DDL and DML commands? (1)
INSERT INTO, SELECT FROM, DEELTE FROM,UPDATE...SET

10.

Chanakya has to create a database named **MATHS** in MYSQL. (3)
He now needs to create a table named **ARITHMETIC** in the database to store
the records of various angles. The table **ARITHMETIC** has the following
structure:

Table: ARITHMETIC

FIELD NAME	DATA TYPE	REMARKS
ARITHMETICCODE	CHAR(5)	Primary Key
TYPENAME	CHAR(30)	
VALUETYPE	INTEGER	

Help him to complete the task by suggesting appropriate SQL
commands.

Section C
Each question carries 4 marks (4)

11. Write queries (a) to (d) based on the tables **STORE** and
STOCK given below:

Table: STORE

STOREID	NAME	MADEON	STOCK ID	TYPE	REMUNER ATION
120	Neeta	23-Jan-1978	S001	Warehouse	75000
123	Nitin	10-Oct-1977	S002	Shop	59000
129	Navjot	12-Jul-1971	S003	Warehouse	40000
130	Naini	30-Dec-1980	S004	Counter	63000
131	Nairit	06-Apr-1984	S001	Warehouse	65000

Table: STOCK

STOCKID	DEPTNAME	FLOORNO
S001	Food	4
S002	Medicine	10
S003	Shoes	1
S004	Toiletry	3

(a) To display the average REMUNERATION , TYPE wise.
(b) To display name and respective DEPARTMENT NAME of each store
whose REMUNERATION is more than 50000.
(c) To display the names of store whose REMUNERATION is not known, in
alphabetical order in reverse.
(d) To display STOCKID from the table **STORE** without repetition.

12. (i) Give two advantages and two disadvantages of bus topology (2)
OR

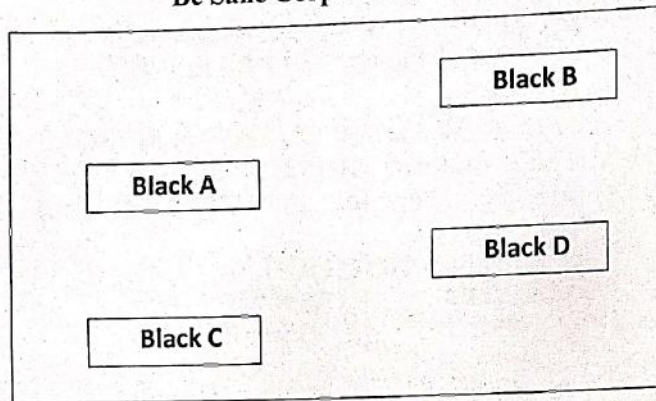Define the following: **OSI Layers**

(ii) What is message switching? State its features (2)

2

13. Be Sane Corporation has set up its new centre at Dadar, Mumbai for its office and web-based activities. It has 4 blocks of buildings. (4)

Be Sane Corporation

Distance between the various blocks is as follows:

A to B	340 m
B to C	120m
C to D	100m
A to D	170m
B to D	150m
A to C	70m

Numbers of computers in each block

Block A - 125
Block B - 150
Block C - 125
Block D - 101

(a) Suggest and draw the cable layout to efficiently connect various blocks of buildings within the Dadar centre for connecting the digital devices.

(b) Suggest the placement of the following device with justification
   i.   Repeater   ii. Hub/Switch

(c) Which kind of network (PAN/LAN/WAN) will be formed if the Dadar office is connected to its head office in Khaar, Mumbai?

(d) Which fast and very effective wireless transmission medium should preferably be used to connect the head office at Mumbai with another new centre at Jammu?

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