

CLASS XII - CBSE

Time Allowed : 2 Hour

COMPUTER SCIENCE

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.

HAVE CONTROL → HAVE PATIENCE → HAVE CONFIDENCE ⇒ 100% SUCCESS
SECTION – A

1. Name the two types of data structures and give difference between them. (2)
2. (i) Write one advantage and one disadvantage of Coaxial cable. (1)
 (ii) Write the full form of the following: (1)
 1. AM 2. FM
3. What is Foreign Key? (2)
4. What do you mean by degree and cardinality of table? (2)
5. Differentiate between WHERE and HAVING clause. (2)
6. (i) What is max () function in SQL? (1)
 (ii) What is primary key? (1)
7. Define degree and cardinality. Also, Based upon given table write degree and cardinality. (2)

Patients

PatNo	PatName	Dept	DocID
1	Leena	ENT	100
2	Supreeth	Ortho	200
3	Madhu	ENT	100
4	Neha	ENT	100
5	Deepak	Ortho	200

OR

Observe the following table and answer the parts (i) and (ii):

Table: Store

Item Code	Item	Qty	Rate
10	Gel Pen Classic	1150	25
11	Sharpener	1500	10
12	Ball Pen 0.5	1600	12
13	Eraser	1600	5
15	Ball Pen 0.25	800	20

(i) In the above table, can we have Qty as primary key.

SECTION – B

8. What are infix, prefix, postfix notations ? (3)

OR

Write an algorithm to implement push operation.

9. Define the following : (3)

(i) Equi-Join (ii) Natural Join (iii) Non-equi join

10. Write SQL commands for the queries (i) to (iii) and outputs for (iv) to (v) based on a tables COMPANY and CUSTOMERS. (3)

Table: COMPANY

CID	NAME	CITY	PRODUCT NAME
111	SONY	DELHI	TV
222	NOKIA	MUMBAI	MOBILE
333	ONIDA	DELHI	TV
444	SONY	MUMBAI	MOBILE
555	BLACKBERRY	MADRAS	MOBILE
666	DELL	DELHI	LAPTOP

Table: CUSTOMER

CUSTID	NAME	PRICE	QTY	CID
101	ROHAN SHARMA	70,000	20	222
102	DEEPAK KUMAR	50,000	10	666
103	MOHAN KUMAR	30,000	5	111
104	SAHIL BANSAL	35,000	3	333
105	NEHA SONI	25,000	7	444
106	SONAL AGGARWAL	20,000	5	333
107	ARUN SINGH	50,000	15	666

- (i) To display those company name which are having price less than 30000.
- (ii) To display the name of the companies in reverse alphabetical order.
- (iii) To increase the price by 1000 for those customer whose name starts with S ?

SECTION – C

11. Consider the table MobileMaster (4)

M_Id	M_Company	M_Name	M_Price	M_Mf_Date
MB001	Samsung	Galaxy	4500	2014-02-12
MB002	Nokia	N1100	2250	2011-04-15
MB003	Sony	Experia M	9500	2017-11-20
MB004	Oppo	Selfie Ex	8500	2010-08-21

Write the Python code for the following

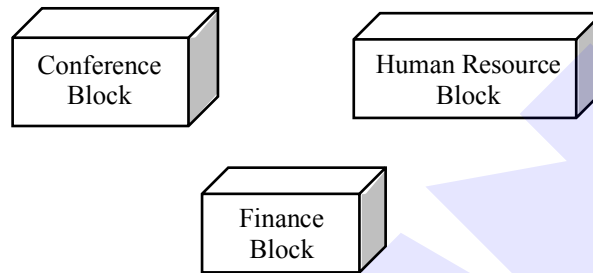
- (i) To display details of those mobiles whose price is greater than 8000.
- (ii) To increase the price of mobile Samsung by 2000.

12. (i) What is the use of band rate ? (2)
 (ii) Explain the term : (2)
 (i) Bandwidth (ii) Broadband

OR

- (i) Give two difference between PAN and LAN. (2)
 (ii) What is the difference between e-mail and chat ? (2)
13. Tech Up Corporation (TUC) 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 : (4)

Physical locations of the blocks of TUC



Block to block distance (in m)

Block (from)	Block (To)	Distance
Human Resource	Conference	60
Human Resource	Finance	120
Conference	Finance	80

Expected number of computers

Block	Computers
Human Resource	125
Finance	25
Conference	60

- (i) Which will be the most appropriate block, where TUC should plane to install their server ?
 (ii) Draw a block to block cable layout to connect all the buildings in the most appropriate manner for efficient communication.
 (iii) What will be the best possible connectivity out of the following, you will suggest to connect the new set up of offices in Bangalore with its London based office.
 • Infrared
 • Satellite Link
 • Ethernet cable
 (iv) Which of the following device will be suggested by you to connect each computer in each of the buidlings ?
 • Gateway
 • Switch
 • Modem