# CHS EDUATION CENTRE
## Pre – Board Exam (2021-22)
### SUBJECT – COMPUTER

**T.T. : 2 : 30 Hrs**                              **CLASS - XII**                              **M.M.: 70**

*General Instructions*

*1. There are 13 questions in the question paper. All questions are compulsory.*

*2. Question no. 1 is a Case Based Question, which has five MCQs. Each question carries 2 marks.*

*3. Question no. 2-5 are Short Answer Type Questions. Each question carries 4 marks.*

*4. Question no. 6-9 are Short Answer Type Questions. Each question carries 5 marks.*

*5. Question no. 10-13 are Long Answer Type Questions. Each question carries 6 marks.*

**1. Direction** *Read the following passage and answer the questions that follows*

Mr. Rajeshwar has created a stack whose size is fixed for 10 elements and wants to perform some operations on it. He wants to push certain elements and pop some elements from it. He is confused about the operations and how the elements will behave on pushing and popping?

| |
|---|
| Chevrolet |
| Suzuki |
| Honda |
| Mercedes |
| RolsRoyce |

Help him to find the answers of the following questions.

(i)     How many elements can he push more to the stack?

  (a) 3                              (b) 5                              (c) 4                              (d) 1

(ii)    How many elements he needs to take out before "RolsRoyce" will come out?

  (a) 2                              (b) 3                              (c) 4                              (d) 1

(iii)   If 3 elements are popped out and 2 pushed in , what will be the strength of the stack?

  (a) 2                              (b) 4                              (c) 0                              (d) 1

(iv)   If "Tata" and "Datsun" are pushed to the initial stack respectively , which element will be popped out as a result of a pop operation now?

  (a) Chevrolet              (b) Datsun              (c) Tata              (d) RolsRoyce

(v)    If 2 elements are popped out and 4 pushed into the initial stack, how many times a loop needs to iterate to traverse the stack?

  (a) 6                              (b) 3                              (c) 7                              (d) 4

2. Write the name of benefits of networking.

3. Write any two uses of Internet.

3. What do you understand by the term database?

4. What is a DBMS? Expand and explain in short.

5. Differentiate between ALTER and UPDATE commands in SQL.

6. How is char data type different from varchar data type?

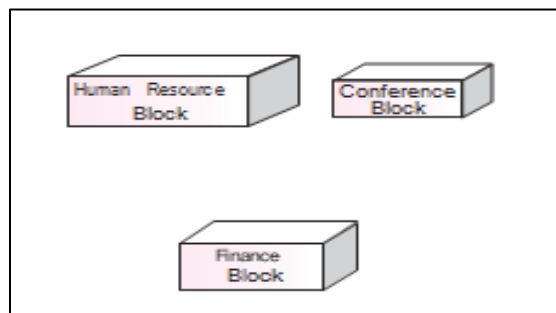7. Which data will get added in table Company by following code?

   Import  mysql.connector

       con =  mysql.connector.connect (host = "localhost", user = "system", passwd = "hello", database =
          "connect")

       cur =  con.cursor ( )

       sql =  "insert into Company(Name, Dept, Salary) values (%s, %s, %s)"

       val = ("ABC", "DBA", 35000)

       cur.execute (sql,  val)

       con.commit ( )

8. What is the use of baud rate?

9. A company wants to form a network on their five computers to a server within the company premises. Represent star and ring topologies diagrammatically for this network.

10. 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 (a) to (e) below.**Physical locations of the blocks of TTC**



**Block to block distance (in m)**

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

**Expected number of computers**

| Block | Computes |
|---|---|
| Human Resource | 25 |
| Finance | 120 |
| Conference | 90 |

a. Which will be the most appropriate block, where TTC should plan to install their server?

b. Draw a block to block 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 set up of offices in Bengalore with its London based office.

   i. Satellite Link          ii. Infrared          iii.Ethernet

d. Which of the following device will be suggested by you to connect each computer in each of the buildings?

   i. Switch                    ii. Modem          iii. Gateway

e. Company is planning to connect its offices in Hyderabad which is less than 1 km. Which type of network will beformed?

11. Granuda consultants are setting up a secured network for their office campus at Faridabad for their day-to-day office and web based activities. They are planning to have connectivity between 3 buildings and the headoffice situated in Kolkata.

   Answer the questions (a) to (e) after going through the building positions in the campus and other details, which are given below.

| Distance between various buildings | |
|---|---|
| Building RAVI to Building JAMUNA | 120 m |
| Building RAVI to Building GANGA | 50 m |
| Building GANGA to Building JAMUNA | 65 m |
| Faridabad Campus to Head Office | 1460 km |

| Number of computers | |
|---|---|
| Building RAVI | 25 |
| Building JAMUNA | 150 |
| Building GANGA | 51 |
| Head Office | 10 |

a) Suggest the most suitable place (i.e. block) to house the server of this organisation. Also, give a reason to justifyyour suggested location.

b) Suggest a cable layout of connections between the building inside the campus.

c) Suggest the placement of the following devices with justification:

   (a) Switch                    (b) Repeater

d) The organisation is planning to provide a high speed link with its head office situated in the Kolkata using awired connection. Which of the following cable will be most suitable for this job?

   (a) Optical fibre            (b) Co-axial cable          (c) Ethernet cable

**e)** Consultancy is planning to connect its office in Faridabad which is more than 10 km from Head office. Whichtype of network will be formed?

12. Explain the role of database management system in maintaining huge volumes of data of different domains. Explain your views using an example.

13. Answer the questions (i) to (v) on the basis of the following tables SHOPPE and ACCESSORIES.

**Table : SHOPPE**

| Id | SName | Area |
|------|-------------------|-------------|
| S001 | ABC Computeronics | CP |
| S002 | All Infotech Media | GK II |
| S003 | Tech Shoppe | CP |
| S004 | Geeks Tecno Soft | Nehru Place |
| S005 | Hitech Tech Store | Nehru Place |

**Table : ACCESSORIES**

| No | Name | Price | Id |
|-----|-------------|-------|-----|
| A01 | MotherBoard | 12000 | S01 |
| A02 | Hard Disk | 5000 | S01 |
| A03 | Keyboard | 500 | S02 |
| A04 | Mouse | 300 | S01 |
| A05 | MotherBoard | 13000 | S02 |
| A06 | Keyboard | 400 | S03 |
| A07 | LCD | 6000 | S04 |
| T08 | LCD | 5500 | S05 |
| T09 | Mouse | 350 | S05 |
| T10 | Hard Disk | 4500 | S03 |

a. To display Name and Price of all the Accessories in ascending order of their Price.

b. To display Id and SName of all Shoppe located in Nehru Place.

c. To display Minimum and Maximum Price of each Name of Accessories.

d. To display Name, Price of all Accessories and their respective SName, where they are available.

e. To display name of accessories whose price is greater than 1000.

*Or*   What is the differences between HAVING clause and WHERE clause?