

Class XII : Computer Science: Term 1(Half Yearly): 2021- 2022 : Marks 35

| Unit No. | Unit Name | MCQ (1 mark) | VSA (1 Mark) | LA (2 marks) | Total marks |
|----------------------|--|-------------------------|-------------------------|-------------------------|------------------------|
| <u>Unit-1</u> | Computer system and organization .Revision of the basic of python. .Functions | 3 | 6 | 2x1 | 11 |
| <u>Unit-2</u> | Data management .Relational databases | 3 | 6 | 2x1 | 11 |
| <u>Unit-3</u> | Programming and computational Thinking .cyber safety . Appropriate usage of social network | 5 | 8 | - | 13 |
| Total marks | | 11 | 20 | 2x2 | 35 |

***Practical = 10 marks;**

*** Lab note book and viva = 3+2 = 5 marks**

Class XII : Computer Practical : Term-1(Half Yearly) : 2021-22 : Marks 15

Expt -10 ; Lab Note book-3 ; Viva -2 : Total = 15

5.1 Unit-4: Python Lab

- Recursively find the factorial of a natural number.
- Read a file line by line and print it.
- Remove all the lines that contain the character `a' in a file and write it to another file.
- Write a Python function $\sin(x, n)$ to calculate the value of $\sin(x)$ using its Taylor series expansion up to n terms. Compare the values of $\sin(x)$ for different values of n with the correct value.
- Write a random number generator that generates random numbers between 1 and 6 (simulates a dice).

5.1. Unit-5: SQL Lab

At least the following SQL commands should be covered

during the labs: create, insert, delete, select, and join. The following are some representative assignments.

- Create a student table with the student id, name, and marks as attributes where the student id is the primary key.
- Insert the details of a new student in the above table.
- Delete the details of a particular student in the above table.
- Use the select command to get the details of the students with marks more than 80.

Class XII : Computer Practical : Term-II (Board Final) : 2021-22 : Marks 15

Expt -10 ; Lab Note book-3 ; Viva -2 : Total = 15

5.1 Unit-4: Python Lab

- Write a recursive code to find the sum of all elements of a list.
- Write a recursive code to compute the n th Fibonacci number.
- Write a Python program to implement a stack and queue using a list data-structure.
- Write a recursive Python program to test if a string is a palindrome or not.
- Write a Python program to plot the function $y = x^2$ using the pyplot or matplotlib libraries.

5.2. Unit-5: SQL Lab

At least the following SQL commands should be covered

during the labs: create, insert, delete, select, and join. The following are some representative assignments.

- Create a new table (name, date of birth) by joining two tables (student id, name) and (studentid, date of birth).
- Create a new table (order ID, customer Name, and order Date) by joining two tables (orderid, customer ID, and order Date) and (customer ID, customer Name, contact Name, country).