**Sanjivani Artificial Intelligence (SAI) Technologies,**

**Sanjivani College of Engineering, Kopargaon**

**(An Autonomous Institute)**

Sanjivani campus, Kopargaon

20 Aug.2023 Time:2 hours

**SQL**

Q1. Write a SQL statement to create a table named jobs including columns job\_id, job\_title, min\_salary, max\_salary and check whether the max\_salary amount exceeding the upper limit 25000.

Q2. Write a SQL statement to change the email column of the employees table with 'not available' for all employees.

Q3. Write a SQL statement to rename the table jobs to jobs\_new.

Q.4 Write a SQL statement to add a column dept\_id to the table locations.

Q.5 Write a SQL statement to insert a record with your own value into the table jobs\_new against each column.

Q.6 Write a query to display the names (job\_id,dept\_id) .

Q.7 Write a query to get the maximum total salaries payable to employees.

Q.8 Write a query to get the average salary and number of employees are working.

Q.9 Create a table manager\_details comprises of manager\_id,manager\_name ,dept\_id and Write a query to make a join with two tables jobs\_new and manager\_details

Q.10 Write a SQL subquery to find the emp\_id of all employees from jobs\_new table who works in the IT department.

**Python**

**Q.1**

Write a Pandas program to replace the 'qualify' column contains the values 'yes' and 'no' with True and False.   
Sample Python dictionary data and list labels:  
exam\_data = {'name': ['Ram', 'Sham', 'Krishna', 'Ramkrishna', 'Shubhendu', 'Mahesh', 'Matthew', 'Laura', 'Kevin', 'Jonas'],  
'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],  
'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],  
'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}  
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

Q2Write a Python program to plot two or more lines with different styles.

Q.3 Create an array[1,2,3] write L1 and L2 norm value for it

Q.4 Write a NumPy program create [[1, 0], [1, 2]] square array and compute the determinant of a given square array.

Q.5 Write a Python function to find the kth smallest element in a list.