**PRACTICAL 8**

**AIM: SVM PROBLEM :**

PYTHON CODE :

import numpy as np

import matplotlib.pyplot as plt

from sklearn.svm import SVC

# Define the positive and negative points

positive\_points = np.array([[4, 1], [4, -1], [6, 0]])

negative\_points = np.array([[1, 0], [0, 1], [0, -1]])

# Plotting the points

plt.scatter(positive\_points[:, 0], positive\_points[:, 1], color='blue', label='Positive (Class +1)')

plt.scatter(negative\_points[:, 0], negative\_points[:, 1], color='red', label='Negative (Class -1)')

plt.axhline(0, color='black',linewidth=0.5)

plt.axvline(0, color='black',linewidth=0.5)

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

plt.title('Data Points')

plt.legend()

plt.grid(True)

plt.show()

**OUTPUT:**

