1)

We are calculating the probability for each dimension of test data and for each label by calculating the mean and variance of respective training data using the Gaussian function.

y1=p11*p21*p

y2=p12*p22*(1-p)

The label which has the highest probability in each test case is assigned that label in case of Bayes Classifier.

Output -

For the 1st test case
Probability for label 1 : 0.0799052387671
Probability for label -1 : 0.000875533957306
Label : 1
For the 2nd test case
Probability for label 1 : 0.0705137524346
Probability for label -1 : 0.000947712325108
Label : 1

For the 3rd test case
Probability for label 1 : 0.000892019455181
Probability for label -1 : 0.0740034653934
Label : -1

For the 4th test case
Probability for label 1 : 0.000787177912237
Probability for label -1 : 0.0801042560015
Label : -1