B.Tech Computer Engineering 8th Semester 2021
Natural Language Processing and Information Extraction [CEN-807]

Sessional 1

Attempt all questions

1. Write the Multinomial Naïve Bayes algorithm for text classification.   (5 marks)
2. Consider the following training data: (10 marks)

S.No.	Document	Class
1.	Natural Language Processing	A
2.	Language Model Learning	A
3.	Ngram Langauge Model	A
4.	Text Classification Model	A
5.	Text Processing Model	A
6.	Computer Vision	B
7.	Image Classification Model	B
8.	Image Segmentation	B
9.	Image Processing	B
10	Object Recognition	B

And Test Data:

1.	Image Learning Model	?
2.	Text Learning Model	?

Predict the Class for test samples using Bag of Words Language and Multinomial Model Naïve Bayes Text Classification. Apply add-2 La Place smoothing and show the calculation of posterior, class conditional and prior probabilities.