National University of Computer and Emerging Sciences, Lahore Campus

Course:	AI		Course Code:	CS401
Program:	BS(Computer Science)		Semester:	Spring 2017
Duration:	10 Min		Total Marks:	5
Paper Date:	27-04-17		Weight	%
Section:	D		Page(s):	
Exam:	Quiz 5		Reg. No	

Instruction/Notes:

Question1 (5)

Train a Multinomial Naïve Bayes Classifier for following text data. Consider unigram features.

Document #	Words	Class
1	Computer vision intelligence computer science	C1
2	Network protocols transmission	C2
3	Robotic arm prosthetics	C3
4	Machine learning data mining computer vision	C1

Solution

Word\Class	C1	C2	C3
Computer	3		
Vision	2		
Intelligence	1		
Science	1		
Network		1	
Protocol		1	
transmission		1	
Robotic			1
arm			1
prosthetics			1
Machine	1		
learning	1		
data	1		
mining	1		
TOTAL	11	3	3

Unfilled cells are zero

Priors:

$P(c1)= 2/4$, $P(c2)= 1/4$, $P(c3)= 1/4$