

LAGOS CITY POLYTECHNIC, IKEJA
SCHOOL OF ENGINEERING AND APPLIED SCIENCE
SCHOOL OF ENGINEERING AND APPLIED SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
2013/2014 FIRST SEMESTER EXAMINATION

COURSE TITLE:	ELEMENTARY PROBABILITY	NO OF QUESTIONS :	6
COURSE CODE:	STA 112ND YR I	TIME ALLOWED:	2 HRS
SEMESTER:	CS	INSTRUCTIONS:	ANSWER
ANY OF STUDENT:	CS	INSTRUCTIONS:	ANSWER

ANY QUESTIONS
QUESTIONS

1. (a) Give A and B to be independent events. Show that A and B are independent.
1. (b) Suppose a bag contains 6 yellow balls and 4 green balls. Two balls are selected at random without replacement, determine the probability that (i) One ball is blue and of the other colour (ii) One ball is blue and of the other same colour. (iii) Two balls are of the same colour.
2. (a) Define the following probability terms (i) Sample space (ii) Sample print (iii) Independent events (iv) Mutually exclusive events (v) Exhaustive events
2. (a) Consider the experiment of throwing two dice (one green and one red). Recording all the elements of the sample space (i) Determine the elements of the sample space and associated probabilities (ii) Event A that a 2 appears from green dice (iii) Event B that the same number appears from the two dice (iv) Event C that the sum of the two numbers appearing from the two dice is 7 (v) Event D that the absolute difference of the two numbers appearing from the two dice is 3.
3. (a) State Bayes theorem
3. (b) Three candidates A, B and C are contesting for the post of the student Union President. The probability of candidates A, B and C winning are 0.3, 0.5 and 0.2 respectively. The probability that A, B and C be elected, the probabilities that the union fee is increased are 0.8, 0.1 and 0.4 respectively. (i) Determine the probability that A be elected given that the union fee is increased. (ii) What is the probability of candidate A elected given that the union fee is increased.
4. (a) Define and illustrate the followings using venn diagrams. (i) Complement of a set (ii) Subset of sets (iii) Subsection of sets (iv) Intersection of sets
4. (a) Out of 125 persons apply for a certain job at a data processing centre, 79 had previous experience and 63 had college degrees and 38 had both work experience and college degrees. 63 had college degrees and 38 had both work experience and college degrees.

