



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2018/2019

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(REAL ESTATE MANAGEMENT)

BRE 211: REAL ESTATE STATISTICS II

DATE: THURSDAY 13TH DECEMBER 2018

TIME: 11.00 A.M. - 1.00 P.M.

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS FROM SECTION TWO

SECTION 1: COMPULSORY (30 MARKS)

QUESTION 1

- a) Define statistics and discuss its SIX stages (8 marks)
- b) For the data set obtained below, tabulate the grouped frequency distribution and calculate the mean (9marks)
- 32, 45, 38, 7, 40, 15, 5, 26, 0, 11, 40, 2, 18, 8, 31, 4, 27, 7, 0, 15, 12, 35, 28, 46, 9, 29, 10, 34, 2, 7, 5, 17, 2, 8, 35, 30, 11, 36, 47, 19, 16, 0, 18, 16, 14, 2, 38, 41, 42, 17, 45, 28, 48, 20, 7, 21, 8, 5, 28, 13, 22, 27, 41, 40, 36, 29, 29, 31, 34, 48.
- c) Discuss ANY FOUR limitations of statistics (4 marks)
- d) State and explain THREE methods of collecting primary data (9 marks)

SECTION 2: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO

- a) Define sampling and give the three purposes of sampling (2.5 marks)
- b) State any FIVE situations where large samples are required (2.5 marks)
- c) State and explain ANY TWO random sampling methods (5 marks)
- d) The average rent paid by 300 people in kileleshwa ward is Kshs 35,000 and the standard deviation is Kshs 4,000. Assuming the rents to be normally distributed, determine how many people
- i. pay a rent of between Kshs 27,000 and Kshs 39,000 (2.5 marks)
 - ii. pay a rent of more than Kshs 43,000 (2.5 marks)
 - iii. pay a rent of between Kshs 31,000 and Kshs 47,000 (2.5 marks)
 - iv. pay a rent of between Kshs 23,000 and Kshs 43,000 (2.5 marks)

QUESTION THREE

a) For the data set given below on monthly income of male workers in Kibera, compute the

- i. Mode (4 marks)
- ii. Mean (4 marks)
- iii. Median (4 marks)
- iv. Standard deviation (4 marks)
- v. 40th percentile(P_{40}) (4 marks)

Monthly earnings (kshs)	No of workers (frequency)
2750-3249	120
3250-3749	152
3750-4249	170
4250-4749	214
4750-5249	410
5250-5749	429
5750-6249	568
6250-6749	650
6750-7249	795
7250-7749	915
7750-8249	745
8250-8749	530
8750-9249	259
9250-9749	152
9750-10249	107

QUESTION FOUR

- a) State ANY FIVE characteristics of a good hypothesis (5marks)
- b) From a survey done on a simple random sample of 1000 residents in Kiambu County, respondents were classified by gender (male or female) and by housing preference (Renting a house, purchasing a ready-made house, or constructing their own house). Results are shown in the contingency table below.

Gender	Housing preferences			Row total
	Renting	Purchasing	Constructing	
Male	15	20	5	40
Female	30	25	5	60
Column total	45	45	10	100

Do the men's housing preferences differ significantly from the women's preferences for the 100 cases at 5% significance level? Use the χ^2 (chi-squared) test to determine this. Take $\chi^2(\text{critical}) = 5.991$ (15 marks)

QUESTION FIVE

- a) State and explain the two types of hypotheses (5 marks)
- b) Find the pearson-product moment correlation coefficient for the data below. (15 marks)

x	8	2	11	6	5	4	12	9	6	1
y	3	10	3	6	8	12	1	4	9	14
