MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

EES 201: STATISTICS FOR ECONOMICS I

DATE: 2/12/2020   **TIME: 2:00 – 4:00 PM**

INSTRUCTIONS:

    (i) Answer question one (Compulsory) and any other two questions

    (ii) Do not write on the question paper

    (iii) Show your working clearly

QUESTION ONE(COMPULSORY) (30 MARKS)

a)   The table below gives the length of clothes from a tailor shop.

Length (Cm)	Freq(f)	Midpoint (x)	f x
10 – 20	3	15	45
20 – 30	7	25	175
30 – 40	10	35	350
40 – 50	16	45	720
50 – 60	34	55	1870
60 – 70	13	65	845
70 – 80	7	75	525
80 – 90	6	85	510
90 – 100	4	95	350

Calculate

    i.   Arithnetric and Geometric Mean   (5 marks)

    ii.   Mode   (3 marks)

    iii.   Median   (2 marks)

b)   Explain clearly the functions and uses of statistics   (6 marks)

c)   Statistical enquiry has a number of steps to be followed .Briefly describe these steps

                                                                                                        (5 marks)

d)   In class of 25 students of statistics for economics wrote a test and results were summarized
     as follows:

12	12	10	11	9	13	12	15
11	13	7	12	11	9	10	16
13	17	6	10	15	5	6	8
9

Using the test results above, Calculate the following:

i.   Mean for this set of data.   (3 marks)

ii.   Median for this set of data.   (2 marks)

iii. Mode values for this set of data.   (2 marks)

iv.   State the relationship among mean, mode median in normal data set   (2 marks)

QUESTION TWO (20 MARKS)

a)   The table below represents an extract of raw data of Statistics for Economics University
     Examination results in Machakos University in 2020.

49	41	45	53	47	46	48	42	43	46
45	36	56	44	61	68	54	58	51	47
47	49	42	48	53	48	41	65	45	52
58	50	55	45	43	72	63	45	38	43
42	47	43	49	46	57	49	44	47	48

i.   Using the marks data in the table, construct grouped Frequency Table.   (8 marks)

ii.   Calculate the median mark in this examination   (4 marks)

iii. Differentiate between primary and secondary data types**.**   (3 marks)

b)   Statstic is known to solve many real world problem whereby in doing so a complete
     statistical study must cover a number of steps/stages. List the steps and briefly explain them.

                                                                                                        (5 marks)

QUESTION THREE (20 MARKS)

a) Differentiate between Arithmetic Mean and Harmonic Mean as used in statistics calculations. (5 marks)

b) Statistical enquiry has a number of steps to be followed. State and briefly explain these steps (10 marks)

c) Define the following terms (5 marks)

    i. Population

    ii. Census

    iii. Bar Graph

    iv. Pie charts

QUESTION FOUR (20 MARKS)

a) The Statistics for Economics CAT results are tabulated below. (7 marks)

    CAT:20,16,14,10,12,13,17,21,12,25,23,24,11,12,10,14,9,8,7

    Calculate:

    i. Mean deviation

    ii. Variance

    iii. Standard deviation

    iv. Coefficient of variation (CV)

    v. Skewness

b) Describe the curves and sketched graph is required (6 marks)

    i. Ogive curves

    ii. Lorenz curve

    iii. The Z chart

c) Explain briefly characteristics of a Normal Distribution. (7 marks)

QUESTION FIVE (20 MARKS)

a) Using the table below, represent the information pie chart and bar chart. (5 marks)

    Given

Departments	Students
Economic	500
Business	1400
Education	1200
Engineering	400
Archetecture	100

b)   Statistics has different meaning. Briefly explain these different meaning of statistics

(5 marks)

c) Using table below:

Class	Σf	cf
5.5 – 9.5	5	5
10.5 – 14.5	6	11
15.5 – 19.5	15	26
20.5 – 24.5	10	36
25.5 – 29.5	5	41
30.5 – 39.5	4	45
35.5 – 39.5	2	47
40.5 – 44.5	2	49

Calculate

    i.   First quartile   (5 marks)

    ii.   The Fifth Deciles and fiftyth percentile   (5 marks)