MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS AND FINANCE

BACHELOR OF ECONOMICS

EES 201: STATISTICS FOR ECONOMICS I

DATE: 25/3/2021 **TIME: 2.00-4.00 PM**

INSTRUCTIONS:

Answer Question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

a) Explain briefly different meaning of statistics. (4 marks)

b) Explain clearly the functions of statistics. (5 marks)

c) In class of 25 student of economics and statistics wrote a test and results of this test are 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							

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)

d) Given the table below, represent the information pie chart.(do not draw to scale)(4 marks)

Departments	**Students**
Economic	500
Business	1400
Education	1200

Engineering	400
Archetecture	100

e) 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)

QUESTION TWO (20 MARKS)

a) The table below represents an extract of raw data of Statistics for Economics exam results in Machakos university in 2018.

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 Frequency Table. (8 marks)

ii. Calculate the median mark in this examination (6 marks)

b) Define the following terms:- (6 marks)

i. Lorenz curve

ii. The Z chart

iii. Primary data

QUESTION THREE (20 MARKS)

a) Assume you are the officer in-charge of sickness and absence records, and that you kept records on 30 officers in your company over a 91-day period. The data for your records are tabulated below:

Number of officers absent	0	1	2	3	4	5
Number of days	44	19	10	8	7	3

i. Calculate the sample mean of the number of officers absent. (4 marks)

ii. Calculate the standard deviation of the number of officers absent per day. (5 marks)

b) Discuss the steps in statistical enquiry. (5 marks)

c) Using at least THREE real world examples, describe clearly how the economist can use statistics to solve world economic problems. (6 marks)

QUESTION FOUR (20 MARKS)

a) Explain six characteristics of a Normal Distribution. (6 marks)

b) The estimates of individuals involved in destruction of private property in the aftermath of political chaos 2017 in 7 different towns are tabulated in the table below.

Town	**Number of individuals involved**
Thika	60
Nyeri	40
Kakamega	61
Kisumu	58
Mombasa	14
Nairobi	14
Nakuru	16

Use the information to construct histogram graph. {*No need to use a graph paper*}(6 marks)

c) Define the following terms (8 marks)

i. Population

ii. Census

iii. Sample

iv. Sampling frame

QUESTION FIVE (20 MARKS)

a) 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 and fourth quartile (6 marks)

ii. Deciles and percentile (6 marks)

b) The Statistics for Economics CAT results are tabulated below. (8 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)