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OFFICE OF THE DEPUTY PRINCIPAL

ACADEMICS, RESEARCH AND STUDENTS' AFFAIRS

UNIVERSITY EXAMINATIONS

2019 /2020 ACADEMIC YEAR

...2nd.... YEAR ...1ST..... SEMESTER REGULAR EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE

ECONOMICS

COURSE CODE: ECO 212
COURSE TITLE: Economic Statistics I

DATE: 13/12/2019 TIME: 8 am -12 pm

INSTRUCTION TO CANDIDATES

- **SEE INSIDE**

THIS PAPER CONSISTS OF 4 PRINTED PAGES **PLEASE TURN OVER**

QUESTION ONE (30 MARKS)

a) Define statistics. (2 marks)
b) Explain any FIVE importance of studying statistics in the field of business. (5 marks)
c) Explain what is meant by the following terms as used in sampling: (6 marks)
   i. Simple Random Sampling
   ii. Systematic Sampling
   iii. Stratified Sampling
d) The following report was prepared by an Examiner Officer on the performance of Mwei District in a National Examination.
   Out of 3,500 male candidates below 20 years of age, 500 passed and 300 failed. Of the 1100 male candidates 20 years old and over, 200 passed and 900 failed.
   As regards the female candidates, out of 500, below 20 years of age, 100 passed and 400 failed. Of these 340 females 20 years old and over, 80 passed and 260 failed.
   Required: Present the above information in a tabular form. (5 marks)

e) From the following information, construct a pie chart.

Product	Sales (000, s)	
A	200	
B	150	
C	100	
D	150	(4 marks)

f) The following figures were taken from a survey on a certain business firm.

	Goods sold
No. of establishments	Net Output (000, s)
23	104
25	250
26	850
20	1400
15	2200
7	3100

Using the above information, draw aLorenze Curve and interpret. (8 marks)

QUESTION TWO (20MARKS)

a) The following distribution shows daily wages of 100 employees.

Wages (sh)	No. of employees
0 – 30	20
30 – 60	35
60 – 90	30
90 – 120	15

Required: Draw the following from the above

i. Ogive curve
ii. Percentage ogive curve
iii. Histogram
iv. Frequency polygon
v. Frequency curve . (10 marks)

b) Calculate the arithmetic mean from the following data using an assumed mean of 25 by short cut method. (10 marks)

Values	5	10	15	20	25	30	35	40	45	50
Frequency	20	43	75	67	70	45	40	10	8	6

QUESTION THREE (20 MARKS)

a) State and explain three important methods of studying correlation. (6 marks)
b) Calculate the Karl Pearson's coefficient of correlation between X and Y given.

X	23	27	28	28	28	30	30	33	35	38
Y	18	20	22	27	21	29	27	29	28	29

(14 marks)

QUESTION FOUR (20 MARKS)

A shopper looks at the price of minced beef in various butcher's shops and finds the following prices (in pence) per half – kg.

100, 130, 96, 146, 118, 144, 126, 130, 120, 126, 88, 158, 126, 122, 132, 128, 116, 126

Find:

i. The mean price. (5 marks)

ii. The range. (3 marks)
iii. The quartile deviation. (6 marks)
iv. The mean deviation. (6 marks)

QUESTION FIVE (20 marks)

a) Outline four methods of collecting primary data. (8 marks)
b) Calculate the Regression Equation of X and Y from the following data. (12 marks)

X	1	2	3	4	5
Y	2	5	3	8	7