



MERU UNIVERSITY COLLEGE OF SCIENCE & TECHNOLOGY

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University Examinations 2010/2011

FIRST YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN BUSINESS
ADMINISTRATION/CERTIFICATE IN BUSINESS ADMINISTRATION

HDC 0102: INTRODUCTION TO BUSINESS STATISTICS

DATE: APRIL 2011

TIME: 1½ HOURS

INSTRUCTIONS: Answer question one and any other *two* questions

QUESTION ONE – (30 MARKS)

- (a) Explain five applications of statistical methods in business (5 Marks)
- (b) Explain briefly:
 - (i) Possible sources of secondary data (3 Marks)
 - (ii) Problems which may arise when using secondary data. (4 Marks)
- (c) Discuss briefly the different components of time series (4 Marks)
- (d) The data below shows the quantities and prices of 5 commodities produced in North Imenti District in the year 2008 to 2009.

COMMODITY	2008		2009	
	PRICE	QUANTITY	PRICE	QUANTITY
A	12	20	14	30
B	14	13	20	15
C	10	12	15	20
D	6	8	4	10
E	8	5	6	5

Required:

- (i) Paasche's price index (4 Marks)
 - (ii) Laspeyre's price index (4 Marks)
- (e) Using good diagrams explain the meaning of:

- (i) Positively skewed distribution (3 Marks)
- (ii) Negatively skewed distribution (3 Marks)

QUESTION TWO – (20 MARKS)

- (a) Distinguish between simple correlation and multiple correlations. (2 Marks)
- (b) The following data relates to the scores obtained by salesmen of a company in an intelligence test and their weekly sales in thousand Kenya shillings.

Salesmen	A	B	C	D	E	F	G	H	I
Intelligence test score (X)	50	60	50	60	80	50	80	40	70
Weekly sales (Y)	30	60	40	50	60	30	70	50	60

- (i) Draw a scatter to represent the above data. (4 Marks)
- (ii) Obtain the regression equation of sales on intelligence test scores of the salesmen (6 Marks)
- (iii) If the intelligence test score of a salesman is 65, what would be his expected weekly sales (2 Marks)
- (iv) Compute Karl Pearson’s correlation coefficient and comment on the relationship between salesman’s intelligence test score and his weekly sales. (6 Marks)

QUESTION THREE – (20 MARKS)

- (a) Explain the merits of any two statistical averages. (4 Marks)
- (b) The data below relates to the profits in £(000) earned by 100 companies.

Profits	No. of Companies
20-30	4
30-40	8
40-50	18
50-60	30
60-70	15
70-80	10
80-90	8
90-100	7

Required:

- (i) Mean (4 Marks)
- (ii) Median (3 Marks)
- (iii) Mode (3 Marks)
- (iv) Standard deviation and comment on the distribution of profits. (6 Marks)

QUESTION FOUR – (20 MARKS)

The following are the marks obtained by students in an examination

28	35	61	29	36	48	57	67
48	40	47	42	41	37	60	62
31	32	35	40	38	37	60	51
37	46	42	38	61	59	58	44
38	44	45	45	47	38	44	47
69	63	54	39	47	50	33	56
57	64						

Required:

- (a) Construct a frequency distribution for group data using 25-34, 35-44, etc as class interval. (7 Marks)
- (b) (i) Represent the data by means of Cumulative frequency polygon (7 Marks)
(ii) What is the exact median point? (1 Marks)
- (c) Describe the stages in a statistical investigation. (5 Marks)