TECHNICAL UNIVERSITY OF MOMBASA
Faculty of Business & Social Studies

DEPARTMENT OF MEDIA & GRAPHIC DESIGN

UNIVERSITY EXAMINATIONS FOR DEGREE IN
BACHELOR OF JOURNALISM AND MASS COMMUNICATION

BMC 4400: INTRODUCTION TO BUSINESS STATISTICS

END OF SEMESTER EXAMINATIONS
SERIES: AUGUST 2013
TIME: 2 HOURS

INSTRUCTIONS:

− This paper consists of **TWO** Sections **A** & **B**.
− Section **A** is **Compulsory**.
− Answer any other **Two** questions in Section **B**.
  This paper consists of THREE printed pages

___

SECTION A (Compulsory)
QUESTION 1

a) Define statistics   (2marks)
b) Explain the use and limitation of statistics.   (8marks)
c) The following is the distribution of firm sizes selected randomly;

Size (Acres)	No. of Item
0-10	20
10-20	21
20-30	15
30-40	10
40-50	8
50-60	5

60-70	9
70-80	3

Calculate;

i)   Arithmetic mean
ii)   Median
iii) Mode
iv)   Range

QUESTION 2

a) Calculate trend by four yearly moving average of the data given below;   (15marks)

yr	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
production	614	615	652	678	681	655	717	719	708	779	757

b) Comment in the moving averages from 1972 to 1982.   (5marks)

QUESTION 3

a) The incidence of communicable diseases in a hospital is such that the patients have a 20% chances of suffering from it what is the probability that out of six patients, 4 or more will contract disease.   (15marks)
b) A normal curve has u=20 and 6=10. Find the area between $x_{1=15}$ and $X_2=40$.   (5marks)

QUESTION 4

a) The following data relates to the prices and quantites of four commodities in the year 1992 and 1993. Construct the following index members of price for the year 1993 by using 1992 as a base-year.   (15marks)

i)   Laspeyre's index number
ii)   Paasches index number
iii) Fisher ideal index   number
iv)   Marshal edge worth index number

commodity	price	quantity	price	quanty
A	5	100	6	150
B	4	80	5	100
C	3	60	5	72
D	12	30	9	33

b) Compare between Laspeyres index No & paasche index no.   (2marks)
c) Explain the Application of Index number.   (3marks)

QUESTION 5

Below are the ages of husbands and wired at the time of their marriage.

Age/husband	30	28	32	40	18	19	31	42
Age/wife	20	25	30	25	20	22	28	30

Required

a) Calculate Karl pearson coeeficient of correlation between Age of husband & wife at the time of marriage. (10marks)
b) Find the age of wife when the age of husband is 35yrs old. (5marks)
c) Find the age of husband when the age of wife is 40yrs. (5marks)