KIBABII UNIVERSITY COLLEGE
(A Constituent College of MasindeMuliro of Science & Technology)

UNIVERSITY EXAMINATIONS

2012 2013 ACADEMIC YEAR

FOR THE DEGREE OF MASTER OF
BUSINESS ADMINISTRATION

COURSE CODE:MBA 803

COURSE TITLE:FINCIAL REPORTING AND CONTROL

DATE: 18TH JUNE 2013   **TIME:** 2.00 PM – 5.00PM

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Instructions to Candidates

Answer Any Four Questions

QUESTION ONE

a) The following data shows the total cost (C) and out put (Q) from five plants in a certain industry .

Total Cost (C)	40	60	50	70	90
Out put (Q)	4	6	7	10	13

(i) Assuming a simple linear relationship use ordinary least squares method to fit a regression equation of Q on C. (6 marks)

(ii) Compute the coefficient of correlation and comment on the value (4 marks)

b) Mapangalal Limited has invested in a particular project in which it has been estimated that after x months of running, the cumulative profit in (shs 000) from the project is given by the function $31.5x - 3x2 - 60$, where x represents time in months. Theproject can run for nine months at most.

Required:

i. Draw a graph which represents the profit function (9 marks)

ii. Calculate the 'breakeven' time points for the project (2 marks)

iii. Compute the initial cost of the project (2 marks).

iv. Use the graph to estimate the best time to end the project (2 marks)

QUESTION TWO

a) The total revenue obtained (in shs 000) from selling x hundred items in a particular day is given by 'R', which is a function of variable x.

Given that $\frac{dR}{dx} = 20 - 4x$, calculate

i. The total revenue function R.

ii. Find the number of items sold in one day that will maximize the total revenue and evaluate the this total revenue.

b) A manufacturer of a new patented product has found that he can sell 70 units a week direct to the customer if the price is shs 48. In a certain newspaper, the price was recently advertised as shs.78 and as a result, only 40 units were sold in a week. The manufacturers fixed costs of production are shs. 1.710 a week and variable costs are shs. 9 per unit. You are required

i. To show the equation of the demand function linking price (P) to quantity demande (X). assuming it to be a straight line, is $P = 118 - X$ (4 marks)

ii. To find where the manufacturer breaks even (4 marks)

iii. To recommend a unit price which would maximize profit, and to find the quantity demanded and profit generated at that price (4 marks)

iv.   Assuming a sudden change in trading conditions resulting in a 20% reduction in demand at all price levels, to find the equation of the new demand function and to recommend how the manufacturer should respond.

QUESTION THREE

a) In a survey conducted by KBS of 600 Jua Kali workers who listened to the radio, 310 regularly listened to the seven o'clock news on radio and 370 regularly listened to late night news on radio. While 120 regularly listened to both news casts.

Required:
i.   The number of workers who listened to the seven o'clock news but not the late night news (5 marks)
ii.   The number of workers who listened to the late night news but not the seven o'clock news. (2 marks)
iii.   The number of workers who listened to exactly one of the news broadcasts (2 marks)
iv.   The number of workers who listened to at least one of the news broadcasts (2 marks)
v.   The number of workers who did not listened to either of the news broadcasts (2 marks)

b) Below   is the distribution of salaries paid to employees of WakWak Company in Kakamega

Salary	10000-11999	12000-13999	14000-15999	16000-17999	18000-19999
No. of Employees	123	138	77	48	14

i.   Calculate the Median and the Mode (4 marks)
ii.   Compute the arithmetic mean (2 marks)
iii.   Calculate the standard deviation (2 marks)
iv.   Calculate Bowley's coefficient of skewness and comment (4 marks)

QUESTION FOUR

a) According to the Ministry of Cooperative Society the number of Loan application in SACCO IS 40% higher in December than in November. In 2011 a random sample of 6 SACCOs were selected, there percentage December loan application increases wee discovered to be as follows:
19.2   18.4   19.8   20.2   20.4   19.0

Assuming a normal population distribution; test the null hypothesis that the true mean percentage increases in loan application is 40% against a two sided alternative at the 10 % level of significance. (10 marks)

b) The following table gives the input-output coefficients for a three sector economy consisting of Agriculture, industry and services.

Input –output Coefficients

From		To	
	Agriculture	Industry	Services
Agriculture 0.3	0.4	0.2	
Industry 0.2	0.0	0.5	
Services 0.1	0.3	0.1	

The projected forecast demand for the three sectors is 100, 40 and 50 million shillings (the minute. Coefficient matrix is given in terms of money). Determine what gross outputs of the three sectors will meet this demand

QUESTION FIVE

a) In a certain supermarket inKitale customers arrive randomly at an average rate of 3.4 per minute. Assuming the customer arrivals form a poission distribution, calculate the probability that:

i.   No customer arrive in any particular minute (3 marks)
ii.   Exactly one customer arrives in any particular minute (3 marks)
iii.   Two or more customers arrive in any particular minute (4 marks)
iv.   One or more customers arrive in any 30 second period. (4 marks)

b) A certain company's record show that the weekly distance travelled by their salesmen is approximately   normally distributed   with mean value of 800 kilometres and standard deviation value of 90 kilometres. The sales manager considers that salesmen who travel less than 600 kilometres in one week arepreforming poorly.

i.   If the companies employ 200 salesmen, how many would be expected to perform poorly in a particular week.
ii.   The sales manager wishes to identify the number of miles travelled in one week, above which only 1 % of salesmen are expected to exceed. What weekly mileage is this (5 marks)

QUESTION SIX

In a research carried out on the relationship between education level andmarital stability was carried outwhere marital stability was classified as low, medium and high. The results are in the contingency table.

Education Level	Low	Marital Stabili Medium	High
Primary	20	18	22
Secondary	50	46	44
College	48	63	59
University	34	43	73

Test at 5% significance level id marital stability is related to education level (25 marks)