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University Examinations 2012/2013

FOURTH YEAR, FIRST SEMESTER EXAMINATIONS FOR DEGREE OF BACHELOR OF COMMERCE

HBC 2225: FINANCIAL INFORMATION SYSTEMS

DATE: DECEMBER 2012 **TIME: 2 HOURS**

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

QUESTION ONE (30 MARKS)

a) Discuss excel VBA as a financial modeling tool on basis of the following points.
   i. Advantages of using VBA over Microsoft excel. (5 Marks)
   ii. Benefits of choosing excel VBA as a financial modeling tool over the other programming languages. (5 Marks)
   iii. Limitations or the down side of learning excel VBA. (5 Marks)

b) Discuss ten attributes of a good financial model citing suitable illustrations. (10 Marks)

c) Using an example of a simple financial model, discuss the types of variables in financial problems showing how they are all related. (5 Marks)

QUESTION TWO (20 MARKS)

a) In developing a cash management model, discuss the mathematical aspects by describing the two main models involved and their assumptions and formulae. (12 Marks)

b) Describe the purpose/objective of such a model by discussing the questions that such a model could be used to answer. (8 Marks)

QUESTION THREE (20 MARKS)

Kinishi, your client is planning to save Ksh. 100,000 annually for the next 10 years and invest the money in a mutual fund earning 8% per year interest income on it. He wishes to determine the present value of this annuity and how much money he will have 10 years from now if he makes the first investment today and make a total of 10 contributions. He is also wondering how the present value and future value will differ if he makes the first investment one year from now. Advise him on the following;

a) Identify and define the variables involved. (3 Marks)
b) Describe the mathematical and financial aspects involved. (5 Marks)
c) Explain at least three methods for testing such a model. (6 Marks)
d) Discuss three methods of documenting such a model on excel. (6 Marks)

QUESTION FOUR (20 MARKS)

Mondo factories Ltd is a company operating a manufacturing factory is Timau. They are in the process of sourcing for a financial model that would enhance their inventory management process. Describe in details, the activities to be carried out by the financial modeler in each of the steps involved in development and maintenance of an inventory simulation model including an explanation of the expected results at every stage. (20 Marks)

QUESTION FIVE (20 MARKS)

a) In the process of developing a financial model, a financial analyst sought to investigate the relationship between market price per share (MPS) and the earnings per share (EPS). From the available financial theory, he learnt that there is a linear relationship and that the MPS is influenced by the EPS. The following array shows the EPS and the MPS for each of the years shown which he compiled from the company's past financial statements.

year	MPS	EPS
2011	5.0	2.0
2010	5.5	2.5
2009	6.0	3.2
2008	7.0	3.6
2007	7.2	3.3
2006	7.7	4.0
2005	8.4	4.2
2004	9.0	4.6
2003	9.7	4.8
2002	10.0	5.0

Required:

i. Assist the financial analyst and estimate an equation that relates the MPS and EPS. (6 Marks)

ii. What information is he able to derive from each of the parameters in this equation? (2 Marks)

iii. How sensitive is the MPS to charges in EPS? (1 Mark)

iv. The analyst forecasts that the EPS in the year 2012 will be 6.0. Forecast the value for MPS in this case. (2 Marks)

b) Jean was observing the analyst struggling through the calculations in order to determine the equation that relates the two variables in part (a) above. This got her thinking about the possibilities of developing a model which could solve such problems of estimating a regression equation given an array of data for the analysts. She is in the process of developing the model and has gone through the first four steps. Assist her by sketching the steps which will be followed to solve the problem by showing the activities involved in steps five of the process i.e design the model. (9 Marks)