JARAMOGI OGINGA ODINGA UNIVERSITY

OF SCIENCE & TECHNOLOGY

UNIVERSITY EXAMINATIONS 2012/2013

2ND YEAR 1ST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

(KISUMU L.CENTRE)

COURSE CODE: IIT 5212

COURSE TITLE: INFORMATION ASSURANCE

DATE: 13/8/2013   **TIME: 2.00-5.00 PM**

DURATION: 3 HOURS

INSTRUCTIONS

1. This paper consists of 5 Questions.
2. Answer Question 1 (Compulsory) and any other 2 questions.
3. Write your answers on the answer booklet provided.

Question one 20marks

1. What are the **three** (3) main categories of security? Describe. 3mks

2. Protection of data is a business, legal and ethical requirement. Explain 6mks

3. Name and give a brief explanation on steps to take to secure a workstation. 8mks

4. What is the importance of information assurance? 3mks

Question two 20marks

You are the I.T manager of a company that is engaged in e-commerce. Customers make online purchases, which are then delivered via currier. It's the company policy that any customer that has a complaint and would wish for a refund is offered full refund on item return.

a) What is information assurance. 1mk

b) What possible issues would you consider with regards to information assurance?

   Explain. 3mks

c) Name and explain ways you would guarantee information assurance for the e-commerce system. 2mks

d) What is a security threat? 1mk

e) Name and explain **four** (4) broad categories of threats. Explain. 4mks

f) Which category of threats would you consider for the e-commerce business with regards to information assurance? Explain. 4mks

g) Using a diagram, explain how you would leverage cloud-computing to assure Information assurance 5mks

Question three 20marks

With regards to question two above, answer the following.

a) Mention and explain **five** (5) factors that would make the e-business attractive to cybler criminals 5mks

b) Name and explain **five** (5) cryptographic goals. 5mks

c) Which cryptographic goals will be most appropriate for the e-business? Explain. 3mks

d) Briefly explain how you would leverage the security controls below to assure information in the e-business.

    i.   Preventive   1mk

    ii.   Detective   1mk

    iii.   Corrective   1mk

    iv.   Deterrent   1mk

    v.   Recovery   1mk

    vi.   Compensating   1mk

e) What is role based access control?   1mk

Question four 20marks

A) Name **two** (2) areas that Digital Millennium Copyright Act (DMCA) criminalizes . 4mks

B) Describe and give a brief explanation of **five** (5) titles that DMCA is divided into. 10mks

C) Name and explain **six** (6) exceptions DMCA provides.
   6mks.

Question five 20marks

a) What are the software development activities?
3mk

b) Compare and contrast Waterfall and Agile SDLC models
3mks

    i.   What are the steps involved in each?
       4mks

    ii.   Mention three (3) advantages for each
       3mks

    iii. Mention three (3) disadvantages for each
       3mks.

    iv. Which between the two models would be best for e-business applications development? Explain
       4mks