



**THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE**

**(A Constituent College of JKUAT)**

(A Centre of Excellence)

# **Faculty of Engineering & Technology**

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**UNIVERSITY EXAMINATION FOR DEGREE IN BACHELOR OF  
TECHNOLOGY IN INFORMATION TECHNOLOGY (BTech. IT M11)**

EIT 4311: E-COMMERCE

**END OF SEMESTER EXAMINATION**

**SERIES: AUGUST 2012**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

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**SECTION A (COMPULSORY)**

**Question One (30 Marks)**

**CASE STUDY: How the State of Pennsylvania Sells Surplus Equipment.**

For many years, the Pennsylvania Department of Transportation (DOT) used a traditional offline auction process. In a radio address on December 6, 2003, Governor Ed Rendell announced that the state would begin holding online auctions to sell its surplus heavy equipment. The old, live in person action system generated about \$5 million a year. Using the internet, the DOT expected at least a 20 percent increase in revenue.

The Commonwealth of Pennsylvania conducted its initial online sale of surplus DOT items in October 2003. The sale consisted of 77 items (including 37 dump trucks) onsite inspection was available twice during the 2 week bidding period. The online sale allowed the Commonwealth of Pennsylvania to

obtain an average price increase of 20 percent, while reducing labour costs related to holding a traditional on-site sale. On high-value specialty items (i.e., a bridge inspection crane and satellite van), results exceeded the estimated sale prices by over 200 percent. The auction was conducted by Asset-auctions.com. The results of the action are shown below:

- i) Total Sales: \$635,416.03
- ii) Half of the bidding activity occurred in the final 2 days.
- iii) Every lot received multiple bids
- iv) Overtime bidding occurred in 39 lots
- v) Over 200 bidders registered for the sale.
- vi) 174 bidders from 19 states and Mexico made about 1,500 bids in 5 days.
- vii) 47 different buyers participated.

The Commonwealth of Pennsylvania now sells surplus equipment and properties using both Asset-auctions.com and eBay.

- a) Identify the e-business model that has been adopted by DOT. **(2 marks)**
- b) What drivers led DOT to go online? **(2 marks)**
- c) Why did the state generate 20 percent more in revenues with the online auction? **(2 marks)**
- d) Unlike the traditional offline auction the online auction exposes the customers to some potential threats, explain these threats. **(6 marks)**
- e) Explain the different on-line advertising methods that could be used by DOT to popularize their website in order to increase their revenue. **(5 marks)**
- f) Identify the different ways in which DOT's customers could pay for their purchases. **(4 marks)**
- g) Why did DOT need an intermediary to conduct the auction? **(3 marks)**
- h) How would DOT match its products to individuals and their preferences? **(6 marks)**

### **SECTION B (Answer Any Two Questions)**

#### **Question Two (20 marks)**

- a) The emergence of the web and the growth of e-commerce and e-business have forced enterprises to move away from private communication networks to public networks. This brings with it new problems and security threats that companies need to deal with "efinance.com" is a financial company offering a variety of services to both private customers and public customers. Naturally security and the safety of data and transactions are of paramount important to the company. For application security requirements, using appropriate examples, discuss your understanding of the following issues: **(12 marks)**
  - i) Authentication
  - ii) Authorization
  - iii) Message integrity
  - iv) Confidentiality
- b) Explain the difference between e-commerce and e-business. **(4 marks)**
- c) Identify **TWO** promotional techniques for the web business should attempt to meet when constructing their web site. **(4 marks)**

#### **Question Three (20 marks)**

Easy Mobile is a new Web based Mobile phone company that sells a variety of mobile products (handsets, Contracts and services). The company employs a marketing consultancy to advise them about developing a successful on-line and off-line marketing promotion before the official launch of Easy Mobile.

Discuss **FIVE** off-line and **FIVE** on-line marketing campaigns for Easy Mobile, clearly indicating the reasons and justifications for each campaign you propose.

**Question Four (20 marks)**

- a) Mobile commerce has become very popular in Kenya over the recent 3 years. Define the term mobile commerce and give reasons for its popularity. **(6 marks)**
- b) Explain what needs to be done to retain m-commerce popularity. **(10 marks)**
- c) Identify and briefly explain **TWO** types of common B2B transactions. **(4 marks)**

**Question Five (20 marks)**

Easy Fly.cim is a new airline agency that requires an E-commerce solution. You have been approached by the company to develop a solution for them. You are aware that designing and developing an E-commerce site requires careful planning and selection of appropriate tools and methodologies. Using E-commerce Development and Management life Cycle (ECDMLC). Discuss the stages that you would need to go through to develop and maintain the site. **(20 marks)**