



**UNIVERSITY OF COLOMBO, SRI LANKA**

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING  
(Successor to the Institute of Computer Technology (ICT))  
**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)**

*Academic Year 2007/2008 – 3<sup>rd</sup> Year Examination – Semester 6*

***IT6302: E-Commerce***

**30<sup>th</sup> August, 2008**  
**(THREE HOURS)**

**To be completed by the candidate**

BIT Examination Index No: .....

**Important Instructions:**

- The duration of the paper is **3 (Three) hours**.
- The medium of instruction and questions is English.
- This paper has **4 questions** and **12 pages**.
- **Answer all 4 questions**. All questions carry **equal marks**.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.  
If a page is not printed, please inform the supervisor immediately.

**Questions Answered**

Indicate by a cross (×), (e.g.  × ) the numbers of the questions answered.

<b>To be completed by the candidate by marking a cross (×).</b>	1	2	3	4
To be completed by the examiners:				

1) (a) Briefly explain four (4) reasons for a company to go in to eBusiness.

(04 marks)

**ANSWER IN THIS BOX**

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**Explain any four of the following:**

- **Global accessibility and sales reach**
- **Closer relationships – B2B among partners**
- **Shorter time to market**
- **Convenient service to customers**
- **24x7x365 service to customers**
- **Customer relationship management (CRM) opportunities**
- **Expanding into newer market**
- **Inexpensive way of reaching global customers**
- **As a strong market tool**

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(b) Explain the following scenarios giving an example for each.

- i. B2C
- ii. B2B
- iii. C2C

(09 marks)

**ANSWER IN THIS BOX**

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**B2C – Business to Customer: giving eCatalogue, ordering online,  
ePayment opportunities to customers, e.g. Amazon.com, DELL.com**

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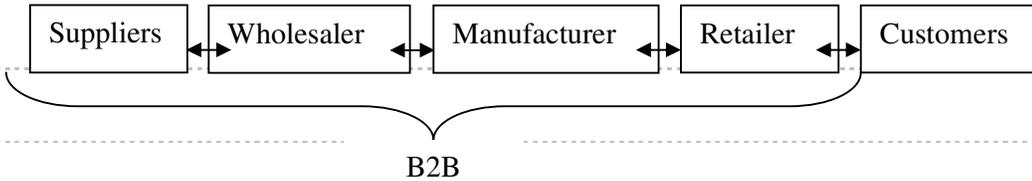
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*Continued...*

**B2B – Business to Business: online collaborations with business partners**

**E.g. Supply chain management.**

**In the garment industry,**



**C2C – Customer to Customer: customers of products getting together with other customers**

**E.g. sellers (individuals) of any products auctioning their products online to buyers (individuals), e.g. ebay**

(c) Briefly explain four (4) issues and concerns companies should consider if they decide to go online.

**(08 marks)**

**ANSWER IN THIS BOX**

**Any four of the following:**

- **Channel conflict**
- **Competition – global**
- **Copyright laws**
- **Security issues and concerns**
- **Customer acceptance**
- **New pricing models to adopt**
- **Not all products could be sold online**

*Continued...*

- **Lack of technical knowledge**
- **Lack of technology infrastructure**
- **Improper eBusiness strategy development**

(d) Why is Supply Chain Management (SCM) an important eBusiness model? Explain the benefits of using SCM.

(04 marks)

**ANSWER IN THIS BOX**

**Supply chain management model:**

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graph LR; S[Suppliers] <--> W[Wholesaler]; W <--> M[Manufacturer]; M <--> R[Retailer]; R <--> C[Customers];
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*Continued...*

- **Cost reduction**
- **Accurate information throughout the supply chain**
- **Fast processing of information**
- **Integrity**
- **Very useful for planning at strategic level and pre-production planning**
- **Proper project management**
- **No conflict in designing new products as all parties are involved**
- **Achieving targets**
- **Customer relationship management**

2) *This question is based on the CASE STUDY given below.*

“LOVELY” is a medium sized company manufacturing shampoo products in collaboration with a company based in Singapore. The Parent company in Singapore provides LOVELY with all the chemicals needed to manufacture the shampoo. The shampoo has 4 varieties at the moment. They are Lemon, Egg, Coconut and Herbal shampoo. These shampoo are made for three target markets; ladies, Gents and Kids.

They have two factories situated in Ratmalana and Katunayake. LOVELY has a problem of managing their orders as there is heavy competition coming from famous International brands. The market is very competitive and LOVELY finds it a little difficult to compete in the local market. Recently, LOVELY started to expand their sales in to the Maldivian market and it appears to have a good response. However, LOVELY finds it difficult to manage their orders and there are problems related to the production process and forecasting as well. Their production process is good, but, due to mismanagement, there are delays in placing orders for raw material and many delays in production due to that.

Currently, LOVELY only uses computers to deal with their factory’s pay roll and production planning. Their staff needs to be trained if new systems need to be introduced. The company is also thinking of going online.

(a) For this company, what are the advantages of using e-Business for their operations?

(05 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <ul style="list-style-type: none"><li>• They can better manage their supply chain</li><li>• As they deal with many other companies, easy to manage operations</li><li>• They can easily expand to other countries</li><li>• Another channel and selling (online)</li><li>• B2B partnership</li><li>• Can do proactive decision making on trends and new products</li><li>• Effective order processing</li></ul>
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(b) Should they use an Inventory control system for their operations? Explain your answer.

(06 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <ul style="list-style-type: none"><li>• They must use an inventory control system to manage supplies, raw material ordering, checking lead time for reordering and for stock control of remaining and finished goods</li><li>• The inventory control systems also be linked with the online web based system for proper management of remaining and finished goods across the globe</li><li>• Supplier management is very easy with a proper inventory control system</li></ul>
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(c) Why would a Company use Free and Open Source Software? Briefly explain the benefits of using such software.

(06 marks)

**ANSWER IN THIS BOX**

- Its free
- Evolutionary
- Reliable
- Flexible and has freedom to develop
- Support
- Developed by the best in the world
- Openness

(d) Propose a web based information system for this company and explain its features and importance.

(08 marks)

**ANSWER IN THIS BOX**

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    graph TD
      MS[Manufacture Web-based System] ---|B2B| B[Banks]
      MS ---|B2C| C[Customers]
      MS ---|B2B| SS[Singapore Supplier]
      MS ---|B2B| CO[Corporate]
      MS ---|B2B| R[Retailers]
      MS ---|B2B| OW[Other Wholesalers]
      subgraph SS_Box [Singapore Supplier]
        SL[Supplier login]
      end
  
```

**Features**

- eCatalogue
- Order processing online

Continued...

- ePayments
- Customer login
- Buyer login (for B2B corporate)
- Connections with banks (B2B)
- Inventory control system links
- Database to handle all product related queries
- Security
- Supply chain management features

3) (a) What is LAMP? What are the components of the LAMP solution stack?

(04 marks)

**ANSWER IN THIS BOX**

LAMP is a free and open-source software combination for the development of web applications

Linux

Apache

MySQL

PHP (or Perl or Python)

(b) (i) What does AJAX stands for?

(03 marks)

**ANSWER IN THIS BOX**

Asynchronous JavaScript And XML

(ii) List two (2) advantages and two (2) disadvantages of AJAX applications.

(04 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p><b>AJAX advantages (any two of the following):</b></p> <ul style="list-style-type: none"><li>• <b>AJAX applications can perform a number of tasks without having their performance being limited by Internet bandwidth. This makes the development of interactive and rich graphic applications.</b></li><li>• <b>Ajax applications are created using existing technologies which are well implemented by all major browsers and platforms. Therefore, Ajax applications are cross-platform compliant.</b></li></ul> <p><b>AJAX disadvantages (Any two of the following):</b></p> <ul style="list-style-type: none"><li>• <b>An Ajax application might behave differently from a classical web application. E.g. Brower's back button would not work</b></li><li>• <b>Without clear feedback to the user, network latency might result in a delay in the interface of the web application which is something the user might not expect or understand.</b></li><li>• <b>The browser should support JavaScript and it should be enabled in the browser.</b></li></ul>
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(c) (i) What is a cookie?

(03 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p><b>A cookie is a text-only string saved under the web browser containing values for parameters set by a website for future reference.</b></p>
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(ii) List four (4) parameters which can be found in a cookie?

(04 marks)

**ANSWER IN THIS BOX**

Any four of the following:

- The name of the cookie
- The value of the cookie
- The expiration date of the cookie
- The path the cookie is valid for
- The domain the cookie is valid for
- The need for a secure connection to exist to use the cookie

(d) (i) What is a smart card?

(03 marks)

**ANSWER IN THIS BOX**

A smart card is a personal card in the same format as a credit card with an integral microprocessor. It may be used for identification or to store personal information.

(ii) List four (4) advantages which smart cards offer to its holders?

(04 marks)

**ANSWER IN THIS BOX**

Any four of the following:

- Greater protection for personal information
- Making online payments
- Verifying authentication for online payments
- Can store multiple application data

- 4) (a) List four (4) services carried out by the Information and Communication Technology Agency (ICTA) of Sri Lanka?

(08 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p>Any four of the following:</p> <ul style="list-style-type: none"><li>• Develop the information infrastructure of the country connecting villages and towns to the world</li><li>• Helps to enable laws for e-government and e-commerce</li><li>• ICT human resource development</li><li>• Modernize the public sector and deliver citizen services through e-government constructs</li><li>• ICT promotion, investment and private sector development</li><li>• Bridge the digital divide with applications aimed at poverty reduction and social development</li></ul>
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- (b) The Information and Communication Technology Act No. 27 of 2003 has been enacted by the Government of Sri Lanka to fulfill the need of the development of Information and Communication Technology in the country. What was the main objective of this Act?

(03 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p>ICTA of Sri Lanka to facilitate the Implementation of National Policy on Information and Communication Technology and Action Plan of the Government.</p>
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- (c) (i) What is a trademark?

(03 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p>A trademark is a word, symbol or phrase used to identify a particular manufacturer or seller's products and distinguish them from the products of another.</p>
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(ii) What is trademark infringement?

(03 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p>Trademark infringement is a violation of the exclusive rights attached to a trademark without the authorization of the trademark owner or any licensees</p>
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(iii) The courts are generally looking at a few factors to analyze whether a particular trademark infringement situation has developed a likelihood of confusion that consumers will believe the products or services originated from the trademark owner. List four (4) factors the courts would look at in such situation.

(08 marks)

<p><b><u>ANSWER IN THIS BOX</u></b></p> <p>Any four of the following:</p> <ul style="list-style-type: none"><li>• The similarity in the overall impression created by the two marks (including the marks' look, phonetic similarities, and underlying meanings)</li><li>• The similarities of the goods and services involved (including an examination of the marketing channels for the goods)</li><li>• The strength of the plaintiff's mark</li><li>• Any evidence of actual confusion by consumers</li><li>• The intent of the defendant in adopting its mark</li><li>• The physical proximity of the goods in the retail marketplace</li><li>• The degree of care likely to be exercised by the consumer; and</li><li>• The likelihood of expansion of the product lines</li></ul>
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