

**UNIVERSITY OF LONDON**

**B.Sc. Examination 2003 (WESTERN)**

**COMPUTING AND INFORMATION SYSTEMS**

**IS 53013A (CIS323) E-Commerce**

**Duration 2 hours and 15 minutes**

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*Do not attempt more than FOUR questions on this paper. Full marks will be awarded for complete answers to FOUR questions.*

*Electronic calculators may be used. The make and model should be specified on the script. The Calculator must not be programmed prior to the examination. Calculators which display graphics, text or algebraic equations are not allowed.*

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**THIS EXAMINATION PAPER MUST NOT BE REMOVED FROM  
THE EXAMINATION ROOM**

### Question 1

- a) Define and compare the business terms, E-commerce, B2C, B2B, and EDI. In your answer provide at least one example of each type of business.  
[7 Marks]
- b) Define and compare the differences between electronic commerce and traditional commerce. In your answer you must include a discussion of the advantages and disadvantages of using electronic commerce to conduct business activities.  
[6 Marks]
- c) Provide a detailed discussion on the ways in which the growth of the Internet and the World Wide Web have stimulated the emergence of electronic commerce. In your answer describe the roles that National Science Foundation and CERN played in the development of the Internet and World Wide Web.  
[6 Marks]
- d) Describe the economic forces that have created an environment that fosters electronic commerce. Your answer should include a discussion on the importance of transaction costs and the ways by which businesses use value chains to identify electronic commerce opportunities.  
[6 Marks]

### Question 2

- a) The Internet is comprised of a network of networks, a set of protocols, utility programs and applications. Describe the general structure of the Internet's network of networks with reference to packet switching, TCP and IP. In addition, identify and outline the role of protocols used to send and receive electronic mail, transmission of files, and retrieve web pages.  
[5 Marks]
- b) Compare and contrast the role of the following Internet utility programs and Internet applications:  
1. PING and TRACERT  
2. FTP and Telnet  
[5 Marks]
- c) Compare and contrast the role of two-tier and three tier Web client and server architectures when deployed for electronic commerce by businesses. Your answer should include a discussion on the differences and similarities between Internet, Intranet and extranets.  
[10 Marks]
- d) Describe the different types of web server software that can be used and the fundamental duties of web server software. Your answer should compare and contrast at least two specific web server software packages.  
[5 Marks]

### Question 3

- a) Communication channel threats (on the Internet) are organised around the classifications of secrecy, integrity and necessity. Briefly describe each of these classifications.  
[6 Marks]
- b) Discuss the need to protect client computers from threats that originate from software and data on the Internet and in particular how Microsoft Internet Explorer and Netscape Navigator provide client-side protection. Your answer should include a discussion of Active content such as Active X, Cookies and JavaScript and the security threats associated with them.  
[7 Marks]
- c) Briefly describe two ways in which a database connected to a WWW site may be compromised.  
[6 Marks]
- d) Explain the difference between public key encryption and private key encryption. List advantages and disadvantages of each encryption method.  
[6 Marks]

#### Question 4

- a) Briefly describe the advantages and disadvantages of using "Smart cards" as a means of conducting electronic commerce transactions.  
[5 Marks]
- b) Discuss the primary issues concerned with the use of Electronic Cash from both a buyer's and a seller's perspective. Include in your answer approaches to holding electronic cash and the advantages and advantages of using Electronic Cash.  
[8 Marks]
- c) Describe an Electronic Wallet and its role in persuading potential customers to buy goods and services from E-commerce Businesses. Include in your answer the significant variations between implementations of Electronic Wallets and the role of the proposed Electronic Commerce Modelling Language (ECML).  
[8 Marks]
- d) Discuss why anyone with a credit card would want to use an electronic cash system on the Internet. That is, what niche might electronic cash fill? Are there problems with electronic cash and international sales?  
[4 Marks]

### Question 5

- a) Discuss three broad categories of Web auction sites that have emerged in this rapidly growing online business. Include in your answer an explanation of how each type of auction operates and any other auction-related services that are provided.  
[8 Marks]
- b) Define what a virtual community is and describe how these communities can be used to help a business promote its products and services and provide support to its customers.  
[5 Marks]
- c) Describe the services that an escrow service company offers. Discuss the advantages and disadvantages of using an escrow service.  
[4 Marks]
- d) Describe sticky features that Web sites use to attract and keep visitors. What makes these features sticky? Why is stickiness important to companies operating Web sites?  
[4 Marks]
- e) Name and briefly describe the three models that are emerging for business-to-business Web auctions.  
[4 Marks]

**END OF EXAMINATION**