

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

Department of Computing

B. Sc. Examination 2017

IS53013A

Electronic Commerce

Duration: 2 hours 15 minutes

Date and time:

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*This paper is in two parts: part A and part B. You should answer ALL questions from part A and TWO questions from part B. Part A carries 40 marks, and each question from part B carries 30 marks. The marks for each part of a question are indicated at the end of the part in [.] brackets.*

*There are 100 marks available on this paper.*

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

# Part A

**Question 1** E-commerce technology

In order for companies to take advantage of the opportunities afforded by electronic commerce technologies and techniques it is important for them to have a good understanding of the unique features of e-commerce technology and how electronic commerce differs from e-business. Describe FIVE unique features of e-commerce technology and explain the difference between e-commerce and e-business. One mark will be allocated for each e-commerce technology described. Up to three marks will be given for an explanation of the differences between e-commerce and e-business, and a further two marks can be awarded for relevant real-world examples.

[10]

**Question 2** Systems development

When developing an e-commerce presence it is important to take a systematic approach and to analyse all factors that need to be considered in order to meet the demands of customers. Describe in detail the stages of the Systems Development Life Cycle methodology, which can be used to take a systematic approach to development, and then detail THREE factors that need to be considered when developing an e-commerce presence. Up to four marks will be awarded for a description of the system's development life cycle. A further two marks will be given for each factor identified as needing to be considered when developing an e-commerce presence.

[10]

**Question 3** E-commerce strategic issues

The five strategic issues that are specifically related to a firm's capabilities to operate at peak efficiency when conducting e-commerce are:

- i. Value chain
- ii. Core competencies
- iii. Available synergies
- iv. The social challenges
- v. The legal challenges.

Describe in detail and provide a real world example of each of these features. Then compare strategic issues specifically related to a firm with those related to an industry as a whole. One mark will be awarded for each strategic issue described, and up to a further five marks will be awarded for a comparison of how strategic issues related to the firm differ from those related to the industry as a whole.

[10]

**Question 4** Revenue models

Compare and contrast FIVE primary revenue models used by e-commerce firms. For each model you describe provide a real world example and explain why you

think the company chose that model of generating revenue. Up to two marks will be awarded for each revenue model compared and contrasted with appropriate example.

[10]

## Part B

### Question 5

#### Evolution of e-commerce

- (a) The evolution of e-commerce can be described in three phases, Innovation, Consolidation, and Reinvention. Each phase was radically different in terms of technologies, techniques and approaches to conducting e-commerce. Compare and contrast each phase of the evolution of e-commerce and detail FIVE major differences between the early years of e-commerce and the e-commerce businesses that operate today. Up to ten marks will be awarded for a description of the three phases of the evolution of e-commerce. A further two marks will be awarded for each of the five major differences identified between the early years of e-commerce and how businesses operate today. [20]
- (b) It is often assumed that being first to the market with an e-commerce product or service is an advantage. However this is not always the case. Describe two major advantages and two disadvantages of being a 'first mover' with a new product or service. Then, identify two real-world businesses which you would describe as first mover products or services, and explain why you think they were a success or failure. Students will be awarded up to three marks for each advantage and disadvantage identified. Students will be awarded up to a further two marks for each example of a first mover product or service identified. [10]

### Question 6

#### Server Technologies

- (a) Compare and contrast the main differences between single-tier and multi-tier site architectures and described FIVE functionalities the Web server component of these architectures provide. Students will be awarded up to five marks for comparing and contrasting single tier and multi tier site architectures. Students will be awarded up to two marks for each functionality of a web server described. [20]
- (b) Describe THREE factors a firm should consider when choosing the best hardware platform for their web site and provide real world example of the affect of making an incorrect decision in one case. Students will be awarded up to two marks for each factor identified, and a further four marks for the example given of the affect of an incorrect decision. [10]

### Question 7

#### E-commerce security

- (a) Genuine fears of e-commerce firms are breaches and incidents that jeopardise their security. In order understand what is required to protect a firm it is useful to analyse there operations using the six dimensions of e-commerce security. Describe each of the six dimensions of e-commerce security and their interrelationship, then give an example of security breaches as they relate to each of the six dimensions. Students will be awarded up to three marks for each dimension described with an

associated example. Up to a further two marks will be awarded if the relationship between each dimension is identified. [20]

- (b) Three points of vulnerability for an e-commerce firm are client level, server level, and over the Internet communications channels. Describe what are some of the steps a company can take to prevent cybercriminal activity from within their firm and explain how they may prevent 'Denial of Service' attacks from outside the firm. Students will be awarded up to two marks for each step described, and up to a further four marks for a full explanation of how denial of service attacks may be prevented. [10]