

THIS PAPER IS NOT TO BE REMOVED FROM THE EXAMINATION HALL



**UNIVERSITY
OF LONDON**

CO3323 ZA

BSc EXAMINATION

**COMPUTING AND INFORMATION SYSTEMS, CREATIVE COMPUTING
and COMBINED DEGREE SCHEME**

Electronic Commerce

Thursday 2 May 2019: 14.30 – 16.45

Time allowed: 2 hours and 15 minutes

DO NOT TURN OVER UNTIL TOLD TO BEGIN

There are **FIVE** questions on this paper. Candidates should answer **THREE** questions. All questions carry equal marks, and full marks can be obtained for complete answers to a total of **THREE** questions. The marks for each part of a question are indicated at the end of the part in [.] brackets.

Only your first **THREE** answers, in the order that they appear in your answer book, will be marked.

There are 75 marks available on this paper.

Calculators are not permitted in this examination.

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Question 1 Electronic commerce strategy and technology

- (a) Many e-commerce businesses believe that being a first-mover into a marketplace is an advantage. However, taking a **first-mover strategy** is a high-risk activity when contrasted with a **smart-follower strategy**. Explain what is meant by first-mover strategy and smart-follower strategy, illustrating your answer with a real-world example of one business for each strategy. Discuss why a first-mover strategy is a high-risk activity which may lead to failure.

Up to 3 marks will be awarded for defining a first-mover strategy and up to 3 marks for defining a smart-follower strategy, with illustrative examples. Up to 4 marks will awarded for discussing why a first-mover strategy is a high-risk strategy.

[10]

- (b) During the second wave of electronic commerce, it became apparent that an online-only strategy was not appropriate for many electronic commerce businesses. These businesses discovered that they needed to take a “clicks and bricks” approach in which the online business activities were combined with an existing physical presence to achieve success. Using the example of a car dealership selling new and used cars, describe **FIVE** reasons why a “clicks and bricks” approach is more effective than a purely online presence.

Up to 2 marks will be awarded for each reason given.

[10]

- (c) Describe **FIVE** changes in Internet technology during the second wave of electronic commerce that has driven the ever-growing consumption of digital content online.

Up to 1 mark will be awarded for each change described.

[5]

Question 2 Electronic commerce models and frameworks

- (a) Using as an example a business of your choice, describe the important electronic commerce concepts of **business model**, **revenue model**, **business activities**, **business processes** and **supply chain**.

Up to 2 marks will be awarded for each concept described in relation to the chosen business.

[10]

- (b) Using a business of your choice as an example, compare and contrast the electronic commerce modelling concepts of **business value chain** and **industry value chain**. Then draw a value chain and industry value chain for that business.

Up to 6 marks will be awarded for comparing the concepts of business value chain and industry value chain, and up to a further 2 marks for each value chain drawn.

[10]

- (c) Explain how an electronic commerce business can use the web to build and maintain trust between the participants in its supply chain.

[5]

Question 3 Networking technologies and protocols

- (a) Describe **THREE** advantages to an electronic commerce business of using the IMAP protocol for its email communications as opposed to the POP protocol.

Up to 2 marks will be awarded for each advantage described.

[6]

- (b) Describe the role of the TCP and IP protocols in the architecture of the Internet. Your answer should include a discussion of the role of each protocol and how they interact with each other.

Up to 2 marks will be awarded for the description of each protocol.

[4]

- (c) The third wave of electronic commerce has seen the need to increase the functionality of the IP protocol from that provided by IPv4 to IPv6. Describe why it is necessary for the Internet to adopt IPv6 and what advantages it has.

[5]

- (d) Describe the differences between **Direct connection EDI**, **indirect EDI** and **Open EDI**. Next, provide an explanation of how a value-added network (VAN) customer sends an EDI transaction set to a trading partner.

Up to 2 marks will be awarded for the description of the differences between each type of EDI connection. Up to a further 4 marks will be awarded for the description of how a VAN customer sends an EDI transaction set to a trading partner.

[10]

Question 4 Scenario: Yikes – UBER for bikes

Yikes is a new electronic commerce business created by two brothers, Tom and Martin Yikes. Yikes aims to take the concepts and revenue model behind the UBER car hire business and apply them to hiring bicycles.

Yikes believes that although fundamentally sound and incredibly successful, UBER is becoming less appropriate for many large cities where traffic and pollution is a serious problem, driving the need for alternatives.

The concept behind Yikes is simple. Each bike can be hired via a mobile app and can be picked up from the nearest location to the rider. When a rider requests a bike, it is immediately locked to the riders account so that no other rider can request it. Each ride is paid for via the Yikes App, so there is no need for any digital devices to take payments or identify riders. When a rider has completed their journey, they leave the bike at their destination, and it is then locked and ready for the next rider.

Yikes has now hired you through an Internet advertising agency to prepare a strategic plan to promote the business and gain early adopters for Yikes. At a presentation to the management team, you proposed that they create a series of branded short films and video adverts with environmental themes, to be produced by award-winning directors.

Several members of the management team thought that simple online text adverts offer several advantages over online video display adverts and that using search engine positioning as a marketing tool was much more effective. Furthermore, it was argued that adverts were sent to people without their permission and that this was unacceptable. There were also concerns over cost, and some argument that short films and video adverts would be difficult to place online.

One of your key arguments for the creation of the short films was that they could be used for viral marketing purposes, and after further discussion, it was agreed that the short films and adverts would be created. Several members of the management team then suggested that Yikes should create pre-roll video adverts which explicitly detail how to use the service. However, once again others wanted to know how they would be deployed, and what content would be pre-rolled.

You have been asked to write two reports answering the following key questions for the strategy.

- (a) Using the scenario above, define the term **viral marketing** and propose a viral marketing campaign to reach young people who are likely to be early adopters for the new service. The campaign will need to cover the following three components:

- A marketing slogan for the new viral campaign.
- A description of how the public can engage in the proposed viral marketing campaign.
- A method to measure the effectiveness of the campaign.

Up to 2 marks will be awarded for the definition of viral marketing, up to 2 marks for the marketing slogan, up to 3 marks for the description of how the public will engage, and up to 3 marks for the method to measure effectiveness.

[10]

- (b) Using the above scenario, define each online advertising method below and propose how Yikes could use each method to promote their new business.

- Pre-roll video advertising
- Branded video short films
- Search Engine positioning
- Permission marketing
- Online text advertising.

Up to 3 marks will be awarded for each advertising method defined.

[15]

Question 5 Scenario: Crystal gift cards

Crystal has been a producer of paper products for the last hundred years. Traditionally it has supplied paper to the newspaper industry, the magazine industry, book manufacturers and the education sector. Crystal papers also supplied government agencies with the paper for all their communications with the public.

Throughout its history, Crystal has always been a business-to-business provider, and never created its own products for sale to the general public. However, with the rise of the Internet, there has been a steady decline in the call for paper-based products and Crystal is seeing a worrying fall in demand for its paper.

At a recent management meeting it was decided that Crystal would begin to create products that it could sell directly to the public. One proposal was for the creation of a gift card business to supply a range of high-quality gift cards to the public.

In order to be successful in the gift card market, it is important to understand the many different customer segments and the behavioural motivations that underpin the buying of gift cards. It is also important to consider the psychographic as well as usage-based motivations for buying gift cards.

Some members of the Crystal management team suggested that the new gift card business website should be promoted through a blog highlighting occasions when people might give gift cards to their friends and family and also suggesting reasons why gift cards are a good choice.

You have been hired as an electronic commerce marketing director to devise a strategy to segment the population so that the new gift cards can be successfully marketed.

- (a) Using the scenario above, define the terms **psychographic market segmentation** and **demographic market segmentation** and provide **TWO** examples of how Crystal could use **EACH** approach to identify potential customers for their gift cards.

Up to 4 marks will be awarded for defining each method of market segmentation, and up to 2 marks for each example of how each method could be used by Crystal.

[16]

- (b) Crystal has decided to create a blog to support its online retail business. Using usage-based market segmentation and behavioural market segmentation, propose **THREE** ideas for blog story posts to appear when the blog launches. For each idea you propose, state what kind of segmentation it illustrates and why it would motivate people to buy Crystal's gift cards.

Up to 3 marks will be awarded for each idea for a blog post.

[9]

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