



UNIVERSITI KUALA LUMPUR BUSINESS SCHOOL

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FINAL EXAMINATION  
JANUARY 2016 SEMESTER

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**SUBJECT CODE** : ECB 30703  
**SUBJECT TITLE** : ENABLING TECHNOLOGIES FOR COMPETITIVE  
SUCCESS  
**LEVEL** : BACHELOR  
**TIME / DURATION** : 9.00 AM - 12.00 P.M / 3 HOURS  
**DATE** : 25th MAY 2016

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**INSTRUCTIONS TO CANDIDATES**

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1. Please read the instructions given in the question paper **CAREFULLY**.
  2. This question paper consists of **TWO (2)** sections; Section A and Section B.
  3. **Section A**; Answer **ALL** questions.
  4. **Section B**; Answer **ALL** questions.
  5. Please write your answers in the answer booklet provided.
  6. All questions must be answered in English (any other language is not allowed)
  7. This question paper must not be removed from the examination hall.
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**THERE ARE SIX (6) PAGES OF QUESTIONS, EXCLUDING THIS PAGE.**

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**SECTION A (Total: 40 marks)**

**INSTRUCTION: Answer ALL questions. Please use the answer booklet provided.**

**Question 1**

List and describe any FIVE (5) major Information Systems.

**[10 marks]**

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**Question 2**

Identify and describe any FIVE (5) of the current trends in contemporary software platforms.

**[10 marks]**

**Question 3**

Explain any FIVE (5) unique features of e-commerce.

**[10 marks]**

**Question 4**

Define "decision making" and explain FOUR (4) stages in decision making.

**[10 marks]**

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**SECTION B: (Total: 60 marks)**

**INSTRUCTION: Answer ALL questions. Please use the answer booklet provided.**

**CASE STUDY**

Read the following case study and answer the subsequent questions

**Case Study: Google, Apple, and Facebook Struggle for Your Internet Experience**

Three Internet titans – Google, Apple, and Facebook are in an epic struggle to dominate your Internet experience, and caught in the crossfire are search, music, video, and other media, along with the devices you use for all of these things, cloud computing, and a host of other issues that are likely central to your life. The prize is a projected \$400 billion retail e-commerce market-place where the major access device will be a smart-phone or tablet computer.

Mobile devices with advanced functionality and ubiquitous Internet access are rapidly overtaking traditional desktop machines as the most popular form of computing. Today, 63 percent of Internet access in the United States takes place using mobile devices. These smartphones and tablets take advantage of a growing cloud of computing capacity available to anyone with a smartphone and Internet connectivity. It's no surprise, then, that today's tech titans are so aggressively battling for control of this brave new mobile world.

Apple, which started as a personal computer company, quickly expanded into software and consumer electronics. Since upending the music industry with its MP3 player, the iPod, and iTunes digital music service over a decade ago, Apple took mobile computing by storm with the iPhone, iPod Touch, and iPad, and it would like to be the computing platform of choice for the Internet. Apple is the leader in mobile software applications, thanks to the popularity of the App Store, with over 800,000 apps for mobile and tablet devices. Applications greatly enrich the experience of using a mobile device, and whoever creates the most appealing set of devices and applications will derive a significant competitive advantage over rival companies. Right now, that company is Apple.

Google, begun by Stanford computer science graduate students Larry Page and Sergey Brin as campus search engine BackRub in 1996, quickly attracted attention for its unrivalled ability to return relevant search results. It continues to be the world's leading search engine. Advertising dollars follow page views, and Google's search dominance quickly led to advertising ascendancy. Between AdWords, its keyword-based search advertising product, AdSense, the most popular online advertising network, and DoubleClick, an intermediary between online publishers and ad networks that buys, sells,

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and conducts performance reporting on display advertising space, Google has controlled online advertising.

In 2005 Google had purchased the Android open source mobile operating system and founded the Open Handset Alliance in order to compete in mobile computing. Google provides Android at no cost to smartphone manufacturers, and many different manufactures have adopted Android as a standard. In contrast, Apple only allow its own devices to use its proprietary operating system, and the hundreds of thousands of apps it sells can only run on Apple products. Since the first Android phone hit the market in October 2008, free, publicly available source code and permissive licensing have propelled Android to the top place in mobile operating system. In 2013 Android was deployed on nearly 52% of handsets in the United States and over 68% worldwide. Android has also become the dominant operating system on tablets worldwide.

Aggressively following the eyeballs, Google purchased Motorola Mobility Holdings for \$12.5 billion in August 2011. This move provided Google with 17,000 patents with another 7,000 in the pipeline to help defend Android from the smartphone patent wars.

In June 2012 Google released its Nexus 7 tablet. The sleek 7-inch tablet received rave reviews and grabbed market share from the iPad and Amazon's Kindle Fire. Google worked with Motorola to develop a smartphone, which focused on improving everyday usability features such as shatter and water resistance and battery life rather than packing the phone with increased specs and mounds of preloaded apps. Not interested in creating an oversized screen "phablet," the companies concentrated instead on optimizing the Android experience.

Command of the smartphone operating system market provides built-in channels for serving ads to mobile devices, for example, on Google-owned YouTube and the Google Maps app. Google had successfully tailored its search results to respond to mobile searchers' needs and accommodate smartphone functionality. But profit margins in the mobile device market are slim, and a \$271 million first quarter 2013 operating loss in the Motorola division was not encouraging.

Google has to safeguard its advertising dominance. The cost-per-click paid for mobile ads consistently trails desktop ads, pushing the average down despite an increase in the number of paid clicks. Google instituted a design change to merge PC ads and mobile ads and present a cleaner mobile search page. Users were increasingly consenting to click mobile ads and shop from their smartphones and tablets. Both changes began to strengthen overall ad prices.

Furthermore, with its advertising networks still contributing 95% of its revenues, Google had to make sure that Facebook did not eclipse it as an advertising vehicle. It launched Google+ (Google Plus) in mid-2011, its fourth foray into social networking. With nearly 500 million registered users at the end of 2012. Google+ had passed Twitter and boasted half as many users as Facebook. Rather than a single website, Google hopes to meld the social experience across all of its sites.

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With Google challenging it on every front, Apple recorded its first profit decline in a decade in the second quarter of its fiscal year 2013. Although Apple has a number of advantages in the battle for mobile supremacy, it may have to produce yet another market disrupting product in order to return to sales growth. Apple has on its side a loyal user base that has steadily grown and is very likely to buy future product and offerings. Declining profits are due to slowing iPhone sales while the share of sales from less profitable products such as the iPad mini is on the rise. Moreover, in order to compete with lower priced Android phones, particularly globally in huge markets such as India and China, Apple might need to develop a low-cost iPhone model.

Apple has a legacy of innovation on its side. In 2011, it unveiled the potentially market disrupting Siri (Speech Interpretation and Recognition Interface), a combination search/navigation tool and personal assistant. Siri used Yelp for local business searches, tapping into its user recommendations and ratings. For factual and mathematical questions, it enlists Wolfram Alpha. Only referring to Google when stumped, it promises personalized recommendations that improve as it gains user familiarity – all from a verbal command. Customer response has been mixed. Google countered by quickly releasing its own AI tool, Google Now.

Facebook, founded by Mark Zuckerberg and a several Harvard friends in 2004, provided a way for local students to meet and share information online. Today it's the world's largest social networking service, with over a billion monthly active users. People use Facebook to stay connected with their friends and family and to express what matters most of them. Facebook Platform enables developers to build applications and Web sites that integrate with Facebook to reach its global network of users and to build personalized and social products.

Facebook always needed to find a way to convert its popularity and trove of user data into advertising dollars and its realized that these dollars would increasingly come from mobile devices. By the third quarter of 2012, Facebook's key mobile ad product, Sponsored Stories, had tripled its revenue. By the first quarter of 2013, nearly one out of every three dollars of Facebook revenue came from advertising on smartphones and tablets.

In March 2013 Facebook overhauled its home page to increase the size of both photos and links and allow users to create topical streams. Job Number 1 was to de-clutter smartphone screens. Marketers love larger pictures, both for their prominence and their greater persuasive impact. Job Number 2 was to give advertisers more opportunities, and more interest information, with which to target market. A "personalized newspaper" with, for example, an op-ed feed featuring followed commentary pages, a sports section tailored to preferred events and teams, and a hometown news feed, will swell Facebook's database with useful tidbits. Whether users oblige remains to be seen; a popular app, Flipboard already serves users interested in creating topical and publication-based streams.

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Next, Facebook introduced a mobile application suite to replace the typical smartphone home screen. Facebook Home is an interface running on top of the Android mobile device into a Facebook phone. Home replaces the smartphone's typical cover screen with Facebook content, such as photos, messages, and status updates. Home still provides access to apps on the phone, but experience is centered on Facebook.

About the same time, Facebook also launched a new search tool to challenge Google dominance of search. Graph Search mines Facebook's vast repository of user data and delivers results based on social signals, such as Facebook "likes", and friend recommendations. It's a more "social" way of searching than Google. If the desire for friend-based recommendations outweighs users' reluctance to divulge more personal information, Graph Search will be a major revenue driver.

While users may be enticed to check-in, and then assign stars or review local restaurants and styling salons, they are unlikely to reveal sensitive data such as their doctors' identities or where their children go to school, let alone be subjected to the embarrassment of a public breakup. Moreover, entering "liked" movies, books, and music, etc., takes time. Will users disclose sufficient data for searches to accurately list and rank results? With time and responsiveness to user practices, Facebook may uncover niche areas at which it excels. Even if it cannot directly rival Google, it should be able to chip away at its dominance at the margins.

Facebook claims that using Graph Search to target market is forbidden, but no policy for supervision and sanctions has been revealed. Facebook is already under Federal Trade Commission (FTC) scrutiny, with independent privacy audits mandated for the next twenty years. Trust is the linchpin upon which Facebook's strategy depends. Eroding user trust means less data to generate relevant search results and less impetus to use Facebook. Connect to connect to third-party sites and services. Facebook must tread carefully. But if Facebook can succeed in making itself synonymous with mobile access, the company could very well compete for global advertising dominance, with much of the world's population just coming on line- on inexpensive Android smartphones.

Sources: Eric Zeman, "Android Tables Edge Out iPad: IDC," *Information Week*, May 2, 2013; Evelyn M. Rusli, "The Challenge of Facebook's Graph Search," *Wall Street Journal* January 16, 2013 and "Facebook's Mobile Boom," *Wall Street Journal*, May 2, 2013; JoAnna Leach, "Facebook Home: Startups Show the Pros and Cons of 'Launchers'" *Wall Street Journal*, April 5, 2013; Matthew Lynley and Evelyn M. Rusli, "What Is Facebook 'Home'?", *Wall Street Journal*, April 4, 2013; Dan Graziano, "Motorola and Google Plan to Fight against the Rise of Phablets," *BGR*, April 16, 2013; Angela Moscaritolo, "Apple Leads U.S. Smartphone Market, But Android Is Top OS," *PC Mag.com*, April 4, 2013; Somini Sengupta, "Fortunes of Facebook May Hinge on Searches," *New York Times*, January 14, 2013; Somini Sengupta, "Facebook Shows Off New Home Page Design, Including Bigger Pictures," *New York Times*, March 7, 2013; Somini Sengupta, "Facebook Software Puts It Front and Center on Android Phones," *New York Times*, April 4, 2013; "Google internet ad revenue grows 23 percent," *Big News Network*, April 19, 2013; Jeff Benavoli, "Wow. Facebook Is Already Making \$3 Million A day On Mobile Ads," *Forbes*, October 23, 2012; Amir Efrati and Spencer E. Ante, "Google's \$12.5 Billion Gamble," *The Wall Street Journal*, August 16, 2011; John Letzing and Amir Efrati, "Google's New Role as Gadget Maker," *The Wall Street Journal*, June 28, 2012; Claite Cain Miller, "Google, a Giant in Mobile Search, Seeks New ways to Make It pay," *The New York Times*, April 24, 2011; and Evelyn M. Rusli, "Google's Big Bet on the Mobile Future," *The New York Times*, August 15, 2011

**Case Study Questions**

**Question 1**

Compare the business model and core competencies of Google, Apple and Facebook. Explain your answer.

**[15 Marks]**

**Question 2**

Discuss the reasons that make mobile computing so important to companies like Google, Apple and Facebook.

**[15 Marks]**

**Question 3**

Which company and business model do you think is most likely to dominate the Internet and why? Elaborate your answer.

**[15 Marks]**

**Question 4**

Discuss the implications would it make to a business or to an individual consumer if Apple, Google, or Facebook dominated the Internet experience.

**[15 Marks]**

**[Total: 60 Marks]**

END OF QUESTION PAPER

