

**EASTERN UNIVERSITY, SRI LANKA**  
**FACULTY OF COMMERCE AND MANAGEMENT**  
**FINAL YEAR - FIRST SEMESTER EXAMINATION IN BACHELOR OF COMMERCE**  
**2014/ 2015 (MAY 2017)**  
**(PROPER/ REPEAT)**

**COM 4023 E-COMMERCE**

**Answer all questions**

**Time: 03 Hours**

01.

**Case Study: Freemium Takes Pandora Public**

Pandora is the Internet's most successful radio service. As of June 2015, it had over 250 million registered users (225 million of whom access the service via a mobile device) and about 80 million active listeners. Pandora accounts for more than 45% of all Internet radio listening hours, more than double its closest competitor, Spotify, and a 9% share of total U.S. radio listening (both traditional and Internet).

Pandora's founders, Will Glaser and Tim Westergren, launched Pandora in 2005. Their biggest challenge was making a business out of a totally new kind of online radio station when competing online stations were making music available for free, many without advertising, and online subscription services were streaming music for a monthly fee and finding some advertising support as well. Online music illegally downloaded from P2P networks for free was also a significant factor, as was iTunes, which by 2005 was a roaring success, charging 99 cents a song. The idea of a "personal" radio station playing your kind of music was very new.

Pandora's business strategy is referred to as "freemium." A freemium strategy is based on giving away some products or services for free while relying on a certain percentage of customers to pay for premium versions of the same product or service. As Chris Anderson, author of *Free: The Future of a Radical Price*, has pointed out, because the marginal cost of digital products is typically close to zero, providing free product does not cost much, and potentially enables you to reach many more people. If the market is very large, even getting just 1% of that market to purchase could be very lucrative. Other notable freemium success stories include LinkedIn, a social network for career-oriented and job networking that offers some basic services for free, such as creating a profile and making connections, but which charges for premium services, and Dropbox, a cloud storage and file sharing service that provides 2 gigabytes of cloud storage for free, but

charges for additional storage.

Pandora's first strategy was to give away 10 hours of free access, and then ask subscribers to pay \$36 a month for a year after they used up their free 10 hours. The result: 100,000 people listened to their 10 hours for free and then refused to pay for the annual service. People loved Pandora but appeared unwilling to pay for it.

Facing financial collapse, in November 2005 Pandora introduced an ad-supported option. Subscribers could listen to a maximum of 40 hours of music in a calendar month for free. After the 40 hours were used up, subscribers had three choices: (a) pay 99 cents for the rest of the month, (b) sign up for a premium service offering unlimited usage, or (c) do nothing. If they chose (c), the music would stop, but users could sign up again the next month. The ad-supported business model was a risky move because Pandora had no ad server or accounting system, but it attracted so many users that in a few weeks it had a sufficient number of advertisers (including Apple) to pay for its infrastructure. In 2006, Pandora added a "Buy" button to each song being played and struck deals with Amazon, iTunes, and other online retail sites. Pandora now gets an affiliate fee for directing listeners to Amazon where users can buy the music. In 2008 Pandora added an iPhone app to allow users to sign up from their smartphones and listen all day if they wanted. By 2009, this "free" ad-supported model had attracted 20 million users.

After attracting a sufficiently large user base, Pandora turned its attention back to its premium service. In late 2009, the company launched Pandora One, a high-end version of its service that offered no advertising, higher-quality streaming music, a desktop app, and fewer usage limits. The service cost \$36 a year. This time around it met with much more success, so much so that Pandora went public in June 2011. By 2015, Pandora had a projected \$1.16 billion in revenue with about 80% coming from advertising and the remainder from subscriptions and other sources.

However, Apple has led a recent push against freemium music streaming services like Pandora and Spotify. In 2014, Apple, sensing a shift away from paid downloads towards streaming services, acquired Beats, which made trendy headphones and had a streaming music service, for \$3 billion. Pandora and Spotify have thrived at the expense of iTunes Music Store, whose revenues have declined steeply for several years, and Apple's first attempt at a streaming service, iTunes Radio, was a bust. In 2015, Apple

after working with Beats, launched its own paid subscription streaming service app, Apple Music.

A freemium strategy makes sense for companies such as Pandora, where there is a very low marginal cost, approaching zero, to support free users. It also makes sense for a company where the value to its potential customers depends on a large network, like LinkedIn. Freemium also works when a business can be supported by the percentage of customers who are willing to pay, like Pandora, especially when there are other revenues like advertising fees that can make up for shortfalls in subscriber revenues. The freemium music streaming services don't have to worry about their business model being sound strategy, but they do have to worry about industry goliaths like Apple and the record labels taking a stand against them.

### Case Study Questions

- i. Compare Pandora's original business model with its current business model. What's the difference between "free" and "freemium" revenue models?  
**(07 Marks)**
- ii. What is the customer value proposition that Pandora offers?  
**(07 Marks)**
- iii. What's the most important consideration when considering a freemium revenue model?  
**(08 Marks)**

**(Total 22 Marks)**

02. Write appropriate answer from following Multiple Choice Questions (MCQ).

- i. Which of the following is the top-selling online retail category?
  - A) apparel/accessories
  - B) computers/electronics
  - C) mass merchant/department stores
  - D) office supplies
- ii. Interactivity in the context of e-commerce can be described as the:
  - A) ability to physically touch and manipulate a product.
  - B) complexity and content of a message.
  - C) ability of consumers to create and distribute content.
  - D) enabling of two-way communication between consumer and merchant.

- iii. Which of the following statements about the Web is *not* true?
- A) It is the technology upon which the Internet is based.
  - B) It was developed in the early 1990s.
  - C) It provides access to pages written in HTML.
  - D) It provides access to Web pages that incorporate graphics, sound, and multimedia
- iv. Which of the following statements is *not* true?
- A) Information asymmetries are continually being introduced by merchants and marketers.
  - B) Intermediaries have not disappeared.
  - C) Overall transaction costs have dropped dramatically.
  - D) Brands remain very important in e-commerce.
- v. E-commerce can be said to have begun in:
- A) 1983.
  - B) 1985.
  - C) 1995.
  - D) 2001.
- vi. Which of the following is *not* true regarding e-commerce today?
- A) Economists' visions of a friction-free market have not been realized.
  - B) Consumers are less price-sensitive than expected.
  - C) There remains considerable persistent price dispersion.
  - D) The market middlemen disappeared.
- vii. E-commerce can be defined as:
- A) the use of the Internet, the Web, and mobile apps to transact business.
  - B) the use of any Internet technologies in a firm's daily activities.
  - C) the digital enablement of transactions and processes within an organization.
  - D) any digitally enabled transactions among individuals and organizations
- viii. The integration of video, audio, and text marketing messages into a single marketing message and consuming experience is an example of which of the following?

- A) richness
- B) ubiquity
- C) information density
- D) personalization

ix. Which of the following is not an example of a social network?

- A) Wikipedia
- B) Twitter
- C) Pinterest
- D) Tumblr

**(09X2 = 18 Marks)**

03. i. What are some of the unique features of e-commerce technology?

**(04 Marks)**

ii. Identify and discuss the five steps in developing an e-commerce security plan.

**(04 Marks)**

iii. Name the five stages in the buyer decision process and briefly describe the online and offline marketing activities used to influence each.

**(04 Marks)**

iv. Briefly explain types of e-commerce with examples.

**(04 Marks)**

v. List some of the major advantages of having a strong brand. How does a strong brand positively influence consumer purchasing?

**(04 Marks)**

**(Total 20 Marks)**

04. i. Name the major points of vulnerability in a typical online transaction.

**(04 Marks)**

ii. Briefly explain how public key cryptography works. How does the addition of a digital signature change the process?

**(04 Marks)**

iii. Identify and discuss the five steps in developing an e-commerce security plan.

**(04 Marks)**

iv. Describe the features and functionality of the major types of digital payment systems in the B2C arena.

**(04 Marks)**

- v. Why is system testing important? Name the three types of testing and their relation to one another.

(04 Marks)

(Total 20 Marks)

05. i. What are the three basic building blocks of the Internet?

(04 Marks)

- ii. What are the new wireless standards, and how are they relevant to Internet II?

(04 Marks)

- iii. Define the systems development life cycle and discuss the various steps involved in creating an e-commerce site.

(04 Marks)

- iv. What are the three main factors to consider when choosing the best hardware platform for your Web site?

(04 Marks)

- v. Discuss the differences between a simple logical and simple physical Web site design.

(04 Marks)

(Total 20 Marks)