Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 04

Total No. of Questions : 15

MBA (2016 to 2017)   (Sem.–4)
E-COMMERCE AND CYBER SECURITIES
Subject Code : MBA-987
M.Code : 71401

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A contains SIX questions carrying FIVE marks each and students have to attempt any FOUR questions.
2. SECTION-B consists of FOUR Subsections : Units-I, II, III & IV. Each Subsection contains TWO questions each, carrying EIGHT marks each and student has to attempt any ONE question from each Subsection.
3. SECTION-C is COMPULSORY and carrying EIGHT marks.

SECTION-A

1. What do you understand by creation of master pages and content pages in website creation?

2. Write short notes on :
   a. Commerce paradigm
   b. Digital cash

3. Discuss in detail about Intrusion detection system (IDS). Why are they required in organizations?

4. Discuss the importance of digital signatures and digital certificates.

5. What is the difference between IPv4 and IPv6? What was the need for IPv6? Also list key features of FTP protocol.

6. List the different files used in website creation and their importance.

SECTION-B

UNIT-I

7. Why companies need to have presence on Internet? Discuss the reasons for exponential rise of e-commerce in India.

8. What is meant by Internet protocols? Discuss in detail UDP protocol.

UNIT-II

9. What is meant by cryptography? Discuss the difference between public key and private key cryptography.

10. Discuss in detail various important security protocols.

UNIT-III

11. Write down a code for table in HTML which displays detailed marks sheet of 10 students.

12. Explain what XML, its usage is and how it can be integrated with databases.

UNIT-IV

13. Discuss the features and limitations of ASP.NET

14. Write notes on

    a. Web services

    b. AJAX

SECTION-C

15. Pandora is the Internet's most successful subscription radio service. In May 2014, Pandora had 77 million registered users. Pandora accounts for over 9 percent of total USA radio listening hours. The music is delivered to users from a cloud server, and is not stored on user devices. It is easy to see why Pandora is so popular. Users are able to hear only the music they like. Each user selects a genre of music based on a favorite musician or vocalist, and a computer algorithm puts together a "personal radio station" that plays the music of the selected artist plus closely related music by different artist. The algorithm uses more than 450 factors to classify songs, such as tempo and number of vocalists. These classifications, in conjunction with other signals from users, help Pandora's algorithms selects next song to play. Users do not control what they hear.

    People love Pandora, but the question is whether this popularity can be translated into profits. How can Pandora compete with other online music subscription services and online stations that have been making music available free, sometimes without advertising? "Free" illegally downloaded music has also been a significant factor, as has been iTunes, charging 99 cents per song with no ad support. At the time of Pandora's founding (2005), iTunes was already a roaring success.

Pandora's first business model was to give away 10 hours of free music and then ask subscribers to pay $36 per month for a year once they used their 10 free hours. Result: 1,00,000 people listen to their 10 hours for free and then refuse to pay for the annual service. Facing financial collapse, in November 2005 Pandora introduced an ad-supported option. 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 listener to sites wherge 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. Today, 70 percent of Pandora's advertising revenue comes from mobile.

In late 2009 the company launched Pandora One, a premium service that offered no advertising higher quality streaming music, a desktop app, and a fewer usage limits. The service costs $4.99 per month. A very small percentage of Pandora listener have opted to pay for music subscriptions, with the vast majority opting for the free service with ads. In fiscal 2013 Pandora's total revenue was $427.1 million, of which $375.2 million (88 percent) came from advertising.

Pandora has been touted as a leading example of the "freemium" revenue business model, in which a business gives away some services for free and relies on a small percentage of customers to pay for premium versions of the same service. If a market is very large, getting just 1 percent of that rriarket to pay could be very lucrative- under certain circumstances. Although freemium is an efficient way of amassing a large group of potential customers, companies. Including Pandora have found that it challenging convert people enjoying the free service into customer willing to pay. A freemium model work best when a business incurs very low marginal cost, approaching zero, for each free user its services, when a business is supported by the percentage of customers willing to pay, and when there are other revenues like advertising fee that can make up for shortfalls in subscriber revenues.

In Pandora's case, it appears that revenues will continue to come overwhelmingly from advertising, and management is not worried. For the past few years, management has considered ads as having much more revenue gathering potential then paid subscription and is not pushing the ad-free service. By continually refining its algorithms, Pandora is able to increase user listening hours substantially. The more time people spend with Pandora, the more opportunities there are for Pandora to deliver ads and generate ads revenue. The average Pandora user listens to 19 hours of music per month.

Pandora is now intensively mining the data collected about its users for clues about the kinds of ads most likely to engage them. Pandora collects data about listener preferences from direct feedback such as likes and dislikes (indicated by thumbs or down on the Pandora site) and "skip this song" requests, as well as data about which device people are using to listen to Pandora music, such as mobile phones or desktop computers. Pandora uses these inputs to select songs people will want to stick around for, and listen to. Pandora has honed its algorithm so they can analyze billions more signals from users

generated over billions of listening minutes per month. Pandora is also trying to figure out when people are listening in groups such as car pools and dinner parties, which might justify Pandora charging higher prices for songs heard by groups rather than single individuals.

The company is looking for correlation users' listening habits and the kinds of ads that would appeal to these users. People's music, movie, or book choices may provide insight into their political believes, religious faith, or other personal issues. Pandora has developed a political ad-targeting system that has been used in presidential, congressional, and gubernatorial campaigns that can use users 'song preferences to predict their political party of choice.

As impressive as these numbers are, Pandora (along with other streaming subscription services)is still struggling to show a profit. There are infrastructure costs and royalty to pay for content from the music labels. Pandora's royalty rates are less flexible than those of its competitors Spotify which signed individual song royalty agreements with each record label. Pandora could be paying even higher rates when its current royalty contracts expire in 2015. About 61 percent of Pandora's revenue is currently allocated to paying royalties. Advertising can only be leveraged so far, because users who opt for free ad-supported services generally don't tolerate heavy ad loads. Apple launched its iTunes radio services for the Fall of 2013 that will compete directly with Pandora. iTunes radio has both free ad-supported options, and a subscription service for $25 per year, undercutting Pandora's annual subscription fee of $60. Can Pandora's business model succeed?

Questions :

a. Analyze Pandora using the value chain and competitive forces models. What competitive forces does the company have to deal with? What is its customer value proposition?

b. Explain how Pandora's freemium business model works. How does the company generate revenue?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.