

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)

ORGANISATION OF ISLAMIC COOPERATION (OIC)

Department of Computer Science and Engineering (CSE)

ONLINE WRITTEN EXAM

WINTER SEMESTER, 2019-2020

DURATION: 1 Hour

FULL MARKS: 50

CSE 4531: E-commerce and Web Security

Answer all the questions provided. Follow the instructions provided by the department. In case of emergency, submit the script via whatsapp: 01516785462

Figures in the right margin indicate marks.

1.

a) What are the major security goals? Explain with appropriate figures.

b) Briefly discuss the differences between *Copyright*, *Trademark* and *Patent*.

c) Briefly explain the activities of the following hackers:

i. Blue Hat Hackers

ii. Grey Hat Hackers

iii. Hactivists

iv. Social Engineering Hackers

v. State/Nation Sponsored Hackers

d) Most widely known example of ransomware is *Cryptolocker*. It is commonly known for encrypting files and demanding payment to decrypt and unlock your data. This type of malware can encrypt anything on your hard drives, USB sticks, shared network drives and files stored in the cloud. This type of ransomware uses a “two key” approach, one public and one private key. The attacker encrypts your data using the public key and uses the unique private key to unlock your data once you’ve paid the ransom. *Cryptolocker* has only targeted computers running windows so far. You’ll know if you’re a victim of *cryptolocker* as warning pop-ups will be displayed on your screen. These will indicate that your data will be destroyed if you do not pay a ransom. If your personal computer is attacked by *Cryptolocker*, how would you respond?

4

6

5×2

5
2.

‘Masabah’ is a new start up by some university friends which is an online clothing store. According to their website –
“The meaning of Masabah is a place where someone's mind eagerly desire to return. A place that attracts people's heart. Our motto is:-**Love, Trust, and Reliability**.
We want to achieve these three prime things from our customers. To get those, we happily work to make customized panjabies and shirts, which are fully designed by customers. Customers will choose the fabrics, provide the design and measurements. Masabah will provide the fabrics and tailoring services. Through us you will wear your dreams. We desire to satisfy people to make our company’s name meaningful.”
Masabah mostly operate their business through Facebook. People can order through their website also.

a) Based on the information provided, create an Internet marketing plan for ‘Masabah’ that includes each of the following:

• Affiliate marketing

• Viral marketing

• Blog marketing

• Social network marketing

Describe how each plays a role in growing the business.

b) Use the Online Consumer Purchasing Model (Figure 1) to assess the effectiveness of an e-mail campaign at a small website devoted to the sales of apparel to the ages 18–26 young adult market in the United States. Assume a marketing campaign of 100,000 e-mails (at 25 cents per e-mail address). The expected click-through rate is 5%, the customer conversion rate is 10%, and the loyal customer retention rate is 25%. The average sale is \$60, and the profit margin is 50% (the cost of the goods is \$30). Does the campaign produce a profit? What would you advise doing to increase the number of purchases and loyal customers?

4×4.5

4+3
- The diagram illustrates the Online Consumer Purchasing Model as a funnel. At the top, five stages are listed in boxes: Awareness—Need Recognition, Search, Evaluation of Alternatives, Purchase, and Post-purchase Behavior—Loyalty. A large arrow points from left to right across these stages. Below the funnel, various marketing activities are listed on the left, corresponding to the stages: Market Communications (Awareness), Search engine, Display ads, E-mail, Affiliates, Social networks, Blogs, Mobile ads, and Apps (Search). Web site hits are listed under Evaluation of Alternatives. Page views, Stickiness, and Site design are listed under Purchase. Acquisition; Conversion is listed under Post-purchase Behavior—Loyalty. At the bottom, specific metrics are provided for each stage: 100,000 Impressions, 10,000 Search clicks, and 1,500 Likes for Awareness; 1,000 Unique visitors (1% of impressions) for Search; 50 purchases (5% rate) for Purchase; and 12 loyal customers (25% retention) for Post-purchase Behavior—Loyalty. A group of silhouettes representing customers is shown at the end of the funnel.
- Figure 1: Online Consumer Purchasing Model