Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science Engineering
Winter Semester 2023-2024
Continuous Assessment Test – I

Programme Name & Branch : B.Tech - CSE with Specialization
Course Name & code: Information Security Management / BCSE354E
Class Number (s):   Common QP
Exam Duration: 90 Min.   **Maximum Marks: 50**

General instruction(s): NIL

Q.No.	Question	Max Marks
1.	The network/security devices are listed below: • Server • Router • Switch • Firewall i) Arrange the above devices in proper order so that security can be provisioned properly to your private network from the outside world. Draw the network diagram using above devices in proper order from your LAN to Internet. ii) Explain the functionalities and usage of above security devices. **Ans:** **Network Diagram - 2 Marks** **Server - Functionality - 2 Marks** ● Data Storage, File Sharing, Providing services like DHCP, DNS **Router- Functionality - 2 Marks** ● Route the packet from one LAN to other LAN, based on Routing Table **Switch- Functionality - 2 Marks** ● Multiplexer - Transmit packets as broadcasting / flooding in the LAN **Firewall- Functionality - 2 Marks** ● Filter the incoming traffic based on IP address, Port No, Service	10
2.	As a security analyst of an organization, you are requested to monitor the data flow to improve the productivity of the employees. What are the possible techniques will you use to implement to secure the content and how? **Ans:** **CMS - Content Management System (2 Marks)** **Ranking and Category (wordpress, white list, block list, URL based filters) - 3 Marks** **5 types of implementation - 5 Marks** ● Client Solutions ● Standalone Solutions ● Integrated Solutions ● Integrated Content Management and Firewalls ● Standalone Appliances	10
3.	A top executive of a major company telephoned the Director of Security and explained that he had just received a threatening message. The message was	10

constructed from words and letters cut out of a magazine and glued to a piece of paper. The message indicated that the executive would be killed. Later, the same executive received a dead cockroach taped to an index card with a straight pin through the body. The message written on the card was," . This could be you . . . ". How will you manage this situation? Justify your answer.

Ans:

Option 1 (Theoretical): 5 Steps x 2 Marks
1. Assessment of Threat Level: Assess the credibility and seriousness of the threat. Even though the threatening message and the dead cockroach could be considered crude, they should never be dismissed outright. Take every threat seriously until proven otherwise.

2. Engage Law Enforcement: Report the incident to law enforcement authorities. This step is crucial as it involves professional investigation and potential legal action against the perpetrator. Law enforcement agencies have the resources and expertise to handle such threats effectively.

3. Preserve Evidence: Preserve all evidence meticulously. This includes the threatening messages, the dead cockroach, and any other related items. Evidence can be critical in identifying the individual or group responsible and building a case against them.

4. Implement Protective Measures: Enhance security measures to protect the executive and other employees. This could involve increasing physical security, such as access controls, surveillance, and security personnel presence. Additionally, consider implementing personal protection measures for the executive, such as escorts or temporary relocation if deemed necessary.

5. Communication and Support: Keep the affected executive informed about the actions being taken and provide necessary support, including counseling if required. Communication is essential to maintain trust and ensure the executive feels supported during this challenging time.

Option 2 (Practical aspects): 5 Steps x 2 Mark
1. Assessment - Find the IP address, Identify the person (Insider - employee / outsider)
2. Report - if insider, top management to form a enquiry committee; if outsider, file a complaint in police through company advocate
3. Enquiry Committee (for internal threat) - Based on top management, form a committee consists of various level like CEO, Team Lead, Team Manager, network administrator, Representative of employees
4. Record the committee finding out as per template
5. Action based on policy and procedure

4.	Explain about the following hazards and suggest how to control each of the hazards in detailed manner • Surfaces/places related hazards • Equipments/items related hazards • Physical Hazards • Electrical Hazards **Ans:**	10

	Explanation - 1 Mark (4 x 1 = 4 Marks) **Example - any two, if 1 example - 1 mark, 2 example - 1.5 -> 4 x 1.5 = 6 Marks**	

5.	(i) What are all the obstacles involved in maintaining good relationship with your peer colleagues (5 Marks)
	(ii) As you being a new employee in an organization, you find very difficult in writing emails to your superiors. Your boss noticed that and told you to follow email etiquettes. Explain about your experience in learning of writing good email in communicating with others. (5 Marks)
	
	Ans:
	(i)
	Physical barriers (1 mark)
	    • When two persons are not present at the same physical location, communicating with each other becomes difficult.
	    • However, technology like virtual meeting applications has made things easier.
	Perceptual barriers- (1 mark)
	Emotional barriers- (1 mark)
	    • Emotions too play a very important role in communication.
	    • For somebody, discussing personal issues in the office may be okay, while another person could consider that as unacceptable.
	Cultural barriers- (1 mark)
	Language Barriers (1 mark)
	
	(ii)
	Email (5 marks)
	
	    • Include a subject line that is crisp and clear and matches the content of the message. Remember, people often decide whether to open an email based on the subject line.
	    • Use your official email address/account to conduct all official messaging. However, if you have to use some other address/name/account due to pressing reasons, then choose one that is appropriate for the workplace.
	    • Avoid using "reply all" unless there is a reason everyone on the list needs to receive the email. Check before sending the message that it is being sent to all the people it is meant for, and there is no-one who will find the message a waste of their time.
	    • Use professional salutations.
	    • Avoid emoticons as far as possible and use exclamation points sparingly. If you choose to use an exclamation point, use only one to convey excitement. While emoticons are fun, you don't know how the recipient will take them. It's better to spell it out and write what you mean.
	    • Make your message easy to read. Don't use long sentences. Use bullets to set off points you want to make. If it is an important or complex content, have someone trusted read it and let you know where was it difficult to understand, so that you may correct it.
	
	    • Keep it short and get to the point. The long e-mail is a thing of the past. Write concisely, with lots of white space, so as to not overwhelm the recipient. Make sure when you look at what you're sending it doesn't look like a burden to read.
	    • Do not sound abrupt or harsh. "Read your message out loud. If it sounds harsh to you, it will sound harsher to the reader. Any emotion when
		10

| | | passed in a written message will seem heightened.
• Know that people from different cultures speak and write differently. Tailor your message depending on the receiver's cultural background or how well you know them.
• It's better to leave humour out of emails unless you know the recipient well. Something that you think is funny might not be funny to someone else.
• Reply to your emails — even if the email wasn't intended for you. It's difficult to reply to every email message ever sent to you, but you should try to. Even if the email was accidentally sent, you can reply informing the sender of the same so that it can be sent to correct person on time.
• Proofread every message. Don't rely only on spell-checkers. Read and re-read your email a few times, preferably aloud, before sending it off.
• Be cautious with colour or All capitals in the message. It's distracting and may be perceived the wrong way. Writing in all capitals can convey that you are shouting in your message, and nobody likes to be yelled at. | |