Charles Darwin University

Final Examination

Family Name	
Given Name/s	
Student Number	
Teaching Period	Semester 2, 2019

HIT333 – Cyber Security	DURATION	
	Reading Time:	**10** minutes
	Writing Time:	**180** minutes

INSTRUCTIONS TO CANDIDATES

Section A: Long Answers	Marks: 10	Time allocated: 40 minutes
Section B: Short Answers	Marks: 40	Time allocated: 140 minutes

EXAM CONDITIONS

<u>You may begin writing from the commencement of the examination session.</u> The reading time indicated above is provided as a guide only.

This is a CLOSED BOOK examination

No calculators are permitted

No handwritten notes are permitted

No dictionaries are permitted

ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED
No additional printed material is permitted	1 x 20 Page Book

THIS EXAMINATION IS PRINTED DOUBLE-SIDED.

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Section A
Long Answer Questions – Answer all questions
Total No of Marks for this Section: 10

This section should be answered in the Answer Booklet provided.
Marks for each question are indicated. Suggested time allocation for Section A: 40 mins

Question 1

Alexander Rocco Corporation has multiple OSs running in its many branch offices. Before conducting a penetration test to determine the network's vulnerabilities, you must analyze the services currently running on the network. Bob Kaikea, a member of your security team who's experienced in programming and database design but weak in networking concepts, wants to be briefed on net-work topology issues at Alexander Rocco Corporation. Write a short report to Bob summarizing port numbers and services that run on most networks. The report should discuss the concepts of well-known ports and give a brief description of the most commonly used ports: 20, 21, 23, 25, 53, and 110.

(5 Marks)

Question 2

In 2015, Anonymous hacked the official Twitter account of the KKK (KuKlux Klan), an extremist, secret society formed after the Civil War to advocate for white supremacy. KKK members wear white robes and hoods to hide their identities. The hacktivists stated that because the KKK had previously threatened to harm a group of protesters, they would retaliate by releasing the names of prominent people who were KKK members. Research hacktivism, and write a one-page paper that answers the following questions:

Is hacktivism an effective political tool? (1 Mark)

Did any of the hacktivists you know have gone too far? (2 Marks)

Can hacktivism ever be justified? (2 Marks)

Section B
Sort Answer Questions – Answer any Ten (10) questions.
Each question carries 4 marks. Total No of Marks for this Section: 40
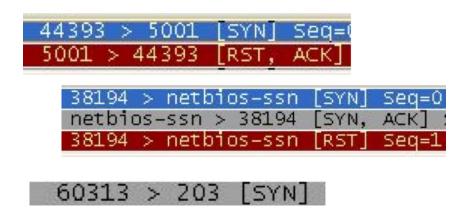
This section should be answered in the Answer Booklet provided.
Marks for each question are indicated. Suggested time allocation for Section B: 140 mins

1. Explain any five threats to Information security with one example for each.

2. Explain the tactics used by social engineers to target the human components of a network

3. Why user awareness is always critical in cybersecurity

4. Explain top 5 countermeasures for wireless security.

5. What is SQL Injection? Explain top 2 countermeasures for avoiding SQL Injection.

6. List and explain any five (5) IoT applications with brief description.

7. Explain the three basic operations of cryptography with one example each.

8. Explain the Three (3) elements that form the C.I.A triangle with respect to Information Security

9. Describe the profile of a normal hacker in the early years of computing and compare it to that of current environment

10. Explain the fundamental difference between cryptography and cryptanalysis with two examples for each.

11. What is risk management? Why is the identification of risks and vulnerabilities to assets are so important in risk management?

12. Explain the states of the ports based on the given packets and its security implications :

!End!