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MIT (CS)-203/PGDCS-07

Advanced Cyber Security Techniques

(MSCCS-18/PGDCS-17) Examination 2021 (Winter)

Time: 2 Hours Max. Marks:80

Note: This paper is of eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section-A

(Long Answer-type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Twenty (20) marks each. Learners are required to answer any two (02) questions only.

 $(2 \times 20=40)$

- Q.1. Answer the following:
 - a. Write a short note network security.(5 marks)
 - b. Discuss emerging threats to Cloud computing and Internet of Things.? (5 marks)
 - c. Discuss five common attacks possible on computer networks with example? (5 marks)
 - d. What is MTM attack, discuss impact of MITM. (5 marks)

PTO

Q.2 Answer the following:

- a. What do you mean by infrastructure security? (5 marks)
- b. Why Maintenance, Monitoring and Analysis of Complete Audit Logs is critical control? (5 marks)
- c. Discuss importance of Penetration Tests and Red Team Exercises. (5 marks)
- d. Discuss any 4 critical security control in detail.(5 marks)

Q.3 Answer the following:

- a. What are the best practices to log management.(6 marks)
- b. What are the event log entries that indicate loggin through different ways(remote, interactive, non-interactive, local)on windows server platforms? (7 marks)
- c. List out Advantages of full disk encryption. (7 marks)

Q.4 Answer the following:

- a. Proper error handling is important in web application. Discuss. (5 marks)
- b. What is SRP? HOW CAN it prevent a malware running from %appdata% directory? (5 marks)
- c. What are MACRO's in the context of office applications. What are the threats they pose? (5 marks)
- d. What can be done to restrict physical access to authorized wireless devices? (5 marks)

- Q.5 Answer the following:
 - a. What is fuzzy hashing? HOW SSDEEP being advantageous over md5hash sum? (10 marks)
 - b. What are honeypots? Compare the various technologies in practice? (10 marks)

Section-B

(Short Answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Ten (10) marks each. Learners are required to answer any four (04) questions only.

 $(4 \times 10=40)$

- Q.1 What is a firewall? discuss different type of firewall filtering.
- Q.2 Answer the following:
 - a. Write note on TIA-942 standard. (5 marks)
 - b. Write note on environmental risk assessment. (5 marks)
- Q.3 Answer the following:
 - a. What is Defense in Depth approach. (5 marks)
 - b. What is DNS cache poisoning. (5 marks)
- Q.4 Answer the following:
 - a. Discuss SQL injection attack with example. (5 marks)
 - b. Security is a continuous process. explain. (5 marks)

P.T.O.

- Q.5 Answer the following:
 - a. List out some of the advantage of wireless LAN over Wired networks? (5 marks)
 - b. List out WPA attacks and the impacts? (5 marks)
- Q.6 Answer the following:
 - a. How waterholing attack is considered a well known method to perform APT? (5 marks)
 - b. Discuss SYN flooding and UDP flooding. (5 marks)
- Q.7 Answer the following:
 - a. Explain Microsoft Baseline Security Analyser.(5 marks)
 - b. What are the best WLAN security practices to follow as a home user? (5 marks)
- Q.8 Answer the following:
 - a. What is the role of Remote Access Trojan in APT?(5 marks)
 - b. Explain threats to email servers and countermeasures.(5 marks)
