CEGCS-04/PGDCS-04/MIT (CS)-104 INFORMATION SYSTEM

Certificate of E-Governance and Cyber Security

P.G. Diploma/M.Sc. Cyber Security (CEGCS-16/17/PGDCS-17/MSCCS)

First Semester, Examination-2020

Time Allowed : 2 Hours Maximum Marks : 80

Note: This paper is of Eighty (80) marks divided into Two (02) sections A and B. Attempt the question 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. (2×20=40)

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- 1. Answer the following :
 - (a) What are the risks involved in e-mail security? How these are mitigated?
 - (b) What are the various causes of IT Infrastructure failure? What are the remedies? 20
- 2. Answer the following :
 - (a) What do you understand by "Man in the middle attack"? Explain briefly.
 - (b) How does PGP work?
 - (c) How security of e-mail in ensured? 20
- 3. Answer the following :
 - (a) What do you understand by Rainbow tables? 10
 - (b) Explain the sequence of planting a backdoor using psexec utility. 10
- 4. What do you understand by "impersonating the token"? How it helps an attacker in escalating privileges?

- 5. Answer the following :
 - (a) What is Steganography? 6
 - (b) What are the various types of hackers?Explain each of them briefly. 7
 - (c) What are the two types of cipher that usessymmetric key algorithm for encryption? 7

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. (4×10=40)
- 1. Explain the process of Key Management?
- 2. Answer the following :
 - (a) What is a hash function?
 - (b) What are the difference between non-keyed digest and keyed digest?
 - (c) What are the two key criteria of a good hash function?

- 3. Explain the differences between TCP and UDP. Which network applications you feel, these protocols are best suited for?
- 4. What is Zone transfer? How this vulnerability can be misused by a hacker? What is the remedial action one must take to mitigate this?
- 5. How to bypass UAC Windows platform?
- 6. Who are the major threats to IT Infrastructure? How to mitigate them?
- Discuss the strategy to improve crack resistivity of a key.
- 8. What are the techniques used by hackers for gathering information?
