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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: III - THEORY EXAMINATION - (2023- 2024)

Subject: Cyber Security

Time: 2 Hours

Max. Marks: 50

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

15

1. Attempt all parts:-

- 1-a. Cyber Security means _____ (CO1) 1
- (a) Cyber Security provides security against malware
 - (b) Cyber Security provides security against cyber-terrorists
 - (c) Cyber Security protects a system from cyber attacks
 - (d) All of the mentioned
- 1-b. Firewall types are - (CO2) 1
- (a) Packet filtering
 - (b) Application Gateway
 - (c) Circuit level Gateway
 - (d) All
- 1-c. The security activities involved in each phase of SDLC are (CO3) 1
- (a) Description ,dedication , encapsulation and output
 - (b) Description,synchronization,encryption,and outputs
 - (c) Description,outputs, synchronization and interdependencies
 - (d) Interdependencies,synchronization,outputs and action
- 1-d. RSA algorithm is ____ cryptography algorithm. (CO4) 1
- (a) Systematic
 - (b) Symmetric
 - (c) Asymmetric

- (d) None
- 1-e. Email appears to originate from source other than actual- [CO5] 1
- (a) Email Spoofing
- (b) Email Bombing
- (c) Email spamming
- (d) None of above

2. Attempt all parts:-

- 2.a. Differentiate between data and Information. [CO1] 2
- 2.b. State the full form of OSI. (CO2) 2
- 2.c. Explain the concept of virtualization. (CO3) 2
- 2.d. Define Cryptography. [CO4] 2
- 2.e. Explain Threats to Mobile Device Security. [CO5] 2

SECTION-B

15

3. Answer any three of the following:-

- 3-a. Discuss in detail stages of Spiral model. Which stages differentiate it from Waterfall model? Do these stages make it a better model? CO1 5
- 3-b. Explain components of Intrusion Detection System. (CO2) 5
- 3-c. Discuss on security issues related to hardware data storage and downloadable devices. (CO3) 5
- 3-d. Discuss security of AES and DES. Which one would you prefer to use while encrypting secret emails? [CO4] 5
- 3.e. What is Cloud architecture? Explain the key aspects in maintaining cloud security. [CO5] 5

SECTION-C

20

4. Answer any one of the following:-

- 4-a. Discuss passive attacks and it's types with example. CO1 4
- 4-b. Define and differentiate between Vulnerability, Threat and Risk. CO1 4

5. Answer any one of the following:-

- 5-a. Differentiate between Identification and Authentication. discuss with example. [CO2] 4
- 5-b. Explain Data Security Considerations in detail. Explain in this reference Data Backup Security. (CO2) 4

6. Answer any one of the following:-

- 6-a. Draw components of IDS. [CO3] 4
- 6-b. Explain Application Development Security with guidelines. (CO3) 4

7. Answer any one of the following:-

- 7-a. How VPN protects the information. Explain with example. [CO4] 4

- 7-b. Describe S/MIME protocol for emails [CO4] 4
8. Answer any one of the following:-
- 8-a. Explain need of Information System also explain the term ISMS. [CO5] 4
- 8-b. Explain public key cryptography? Define its advantages and disadvantages. [CO5] 4

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