AQ – 2783

Second Semester M. E. (Information Technology) (Full Time) Examination

SYSTEM SECURITY

Paper - 2 NMEF 4

P. Pages : 3

Time : Three Hours]   [Max. Marks : 80

Note : (1) Due credit will be given to neatness and adequate dimensions.
(2) Assume suitable data wherever necessary.
(3) Illustrate your answer necessary with the help of neat sketches.

1. (a) Compare stream and Block algorithms.   7

    (b) What is threat ? List and explain the classes of threats.   7

OR

2. (a) Explain AES algorithm in brief.   7

    (b) Explain substitution and permutation in DES.   7

3. (a) Explain in brief Boot sector virus.   6

    (b) What is malicious code ? What are the kinds of malicious code ? Explain
    in brief.   7

OR

4. (a) What are the classic error types that have enabled many recent security
    branches ? Explain them in brief.   7

    (b) List and explain the different types of Torjans in brief.   6

5. (a) What are the problems with biometric ? Explain in brief.   6

    (b) What are the mechanism to protect an object ? Explain in brief. Directory
    mechanism to protect an object.   7

OR

6. (a) Explain Logical and physical representation of segments. 7

   (b) Explain how base register is used for relocating a users program ? 6

7. (a) Explain in brief Clark–Wilson commercial security policy. 7

   (b) What is security kernel ? List and explain the different reasons why security functions may be isolated in a security kernel. 7

OR

8. (a) List and explain the different primitive protection rights in Graham–Denning model. 7

   (b) Explain :—

      (i) Virtulization.

      (ii) Multiple virtual memory space. 7

9. (a) What is sensitive data ? List and explain the factors that can make the data sensitive. 7

   (b) Explain Two–phase update technique with example. 6

OR

10. (a) What are direct and indirect attacks ? List and explain several examples of indirect attacks. 7

    (b) What are the approaches to multilevel security for database ? Explain the approach of sensibility lock. 6

11. (a) What are the steps to be analyze the security risk in a computing system? Explain in brief. 7

(b) What is encryption ? Explain End–to–End encryption with the help of suitable diagram. 6

OR

12. (a) What is impersonation ? What are the choices that an attacker have in impersonation ? Explain in brief. 7

(b) What is firewall ? What are its types ? Explain screening router. 6

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