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Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, April 2014

(2008 Scheme)

08.803-E : SECURITY (F)

Time : 3 Hours Max. Marks : 100

Instructions *: 1)* ***Each*** *question in Part – **A** carries **4** marks. **All** questions in Part – **A** are **compulsory**.*

2) ***Each*** *question in Part – **B** carries **20** marks. Answer **any one** question from **each** Module in Part – **B**.*

PART – A

1. Distinguish between vulnerability, threat and control.
2. Mention any 2 conditions that has to be met by a digital signature.
3. Discuss the common methods through which viruses attack.
4. What are the 3 qualities used by authentication mechanisms to confirm a user's identity ? Give one example for each.
5. Explain any 2 design principles for OS security.
6. Define aggregation in the context of DB security.
7. Explain a spoofing attack.
8. Explain the characteristics of a good security policy.
9. Differentiate criminal law and civil law with respect to the protection they provide against computer attacks.
10. State and explain the principle of adequate protection. **(10×4=40 Marks)**

P.T.O.

PART – B

Module – 1

11. a) Explain any 4 applications of encryption with examples. **10**

    b) Explain the ways with which OS can be used to protect against the design and implementation flaws in programs. **10**

OR

12. a) Summarize the various kinds of malicious codes. **8**

    b) List 3 controls that could be used to detect or prevent salami attacks. **6**

    c) Consider a program to display on your website your city's current time and temperature . Who might want to attack your program ? What types of harm may be anticipated ? What vulnerabilities might be exploited to cause the harms ? **6**

Module – 2

13. a) Summarize the security policies that commercial establishments adopt. **12**

    b) Explain any 2 techniques for controlling access to general objects. **8**

OR

14. a) Discuss the various integrity checks performed by OS for providing security to databases. **12**

    b) Summarize the TCSEC Orange Book Evaluation Criteria. **8**

Module – 3

15. a) Does a PKI perform encryption ? Why does a PKI need a means to cancel or invalidate certificates. **10**

    b) Explain any 5 physical security measures for a computing system. **10**

OR

16. a) Summarize the various security schemes available for securing e-mails. **12**

    b) Explain the techniques for protecting the identity and privacy of a user and the issues related to it. **8**