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Question Paper Code : 71226

M.E. DEGREE EXAMINATION, JUNE/JULY 2013.

Elective

Computer and Communication

CU 9257/CP 956/ 10244 CME 11 – COMMUNICATION NETWORK SECURITY

(Common to M.E. Communication Systems and M.E Networking and Internet Engineering)

(Regulation 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are security goals of a system?
2. What is meant by passive attack?
3. Bring out the differences between block and stream ciphers.
4. What are transposition ciphers?
5. List out the various key management techniques.
6. Why are hash functions employed in secured systems?
7. List the protocols which ensure security at the transport layer.
8. Why do wireless networks require security?
9. What is the principle behind dual signatures?
10. Mention the kinds of security attacks on wireless systems.

PART B — (5 × 16 = 80 marks)

11. (a) Elaborate on various security approaches including cryptography and steganography and point out their salient features? Give diagrams and illustration to substantiate your argument. (16)

Or

- (b) Give a complete overview on various types of attacks and its consequences with reference to the system performance. Tabulate the types of attacks, its sources and its impact. (16)

12. (a) With a neat block diagram, Explain Data Encryption Standard (DES) and its capabilities. (16)

Or

- (b) Give a detailed preface on RSA cryptosystems. Comment on its merits and demerits, if any provide diagrams. (16)

13. (a) What are digital signatures? Explain the various digital signature standards. Provide diagrams. (16)

Or

- (b) Explain why key management is a critical task? Discuss on various key management techniques. Provide necessary diagrams. (16)

14. (a) Present a complete picture on firewall, its types, configuration issues and its limitations. (16)

Or

- (b) (i) Discuss in detail on IP security architecture with neat diagrams. (10)
(ii) Comment on web security requirement and its related issues. (6)

15. (a) Discuss all possible security threats that hits a wireless system. Elaborate on them. (16)

Or

- (b) Explain how security goals are met in infrastructureless systems like adhoc and sensor networks. (16)