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**Question Paper Code : 81375**

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 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 the classifications of security services?
2. Define cryptanalysis.
3. Differentiate between stream ciphers and block cipher.
4. What is the difference between link-to-link encryption and end-to-end encryption?
5. Distinguish between MAC and Hash function.
6. Define Kerberos.
7. What are the properties a digital signature should have?
8. What are the protocols used to provide IP security?
9. What are the services provided by PGP?
10. What are the protocols used to provide security in ad hoc networks?

PART B — (5 × 16 = 80 marks)

11. (a) Write about various security attacks, services and security mechanisms.

Or

- (b) Write short notes on steganography and the elements of cryptography.

12. (a) Explain simplified DES with example.

Or

(b) (i) Explain Playfair cipher and Vernam cipher in detail. (8)

(ii) Explain the different types of possible attacks in RSA algorithm. (8)

13. (a) Explain the classification of authentication function in detail. (16)

Or

(b) (i) Explain in detail Diffie-Hellman key exchange mechanism. (8)

(ii) Compare MD5, SHA1 and RIPEMD-160 algorithm. (8)

14. (a) Explain in detail the operations of Secure Socket Layer in detail. (16)

Or

(b) Explain in detail the architecture of IP security. (16)

15. (a) Write short notes on the following

(i) Worm hole attack

(ii) DoS attack. (16)

Or

(b) Explain in detail the security services and issues in sensor network. (16)