Reg. No. : ☐☐☐☐☐☐☐☐☐☐

Question Paper Code: 52323

M.E. DEGREE EXAMINATION, MAY 2017

Second Semester

Computer Science and Engineering

15PNE203 - NETWORK SECURITY

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Statistical properties of plain text is eliminated with

    (a) confusion   (b) encryption   (c) transposition   (d) diffusion

2. The size of the hash code generated will

    (a) vary with key size   (b) vary with message size
    (c) not vary with message size   (d) None of these

3. IPSec is mandatory in

    (a) IPv4   (b) IPv6   (c) TCP/IP   (d) All the above

4. _____ will ensure the merchants and their payment information.

    (a) Digital certificate   (b) Merchant
    (c) Dual signature   (d) Certificate authority

5. Mechanism to protect private networks from outside attack is

    (a) Firewall   (b) Antivirus
    (c) Digital signature   (d) Intrusion Detection System

PART B - (5 x 3 = 15 Marks)

6. Define diffusion.

7. List the requirements of a hash function.

8. How does tunnel mode provide end to end security?

9. List the key features of SET.

10. What are the requirements of a digital immune system?

PART C - (5 x 16 = 80 Marks)

11. (a) Explain Fiestel cipher structure with a neat block diagram and mathematical representations. (16)

Or

(b) Explain DES algorithm along with key generation with neat diagrams. Give the mathematical representation of encryption and decryption. (16)

12. (a) Explain Diffie Hellman algorithm with example. (16)

Or

(b) Explain DSA algorithm with example. (16)

13. (a) Explain IPSec architecture in detail. (16)

Or

(b) Explain the ISAKMP in detail with message formats and dialogues. (16)

14. (a) Explain SSL protocol with neat diagrams. (16)

Or

(b) Discuss the web security requirements and explain the role of TLS protocol in realizing these requirements. (16)

15. (a) Explain the different types of viruses and countermeasures in detail. (16)

Or

(b) Explain different types malicious software in detail. (16)

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