

R09

Code No: 58030

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, May - 2017

NETWORK SECURITY

(Common to ECE, ECM)

Time: 3 Hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) What are Security Services? Explain each in detail.
- b) With an example, explain how man-in-the-middle attacks are performed by an adversary. [7+8]
- 2.a) List and explain the properties of Hash functions.
- b) Explain various approaches of message authentication. [5+10]
- 3.a) Differentiate between direct digital signatures and arbitrated digital signatures.
- b) Draw and explain the fields in X.509 V3 digital certificate format. [5+10]
4. Explain various services that PGP offers to the e-mail. [15]
- 5.a) Explain in detail Anti-Replay mechanism in AH.
- b) Explain how Diffie-Hellman protocol is vulnerable to man-in-the-middle attack? How is rectified in Oakley protocol? [7+8]
- 6.a) What are the different ways of implementing web security? Mention their advantages?
- b) Discuss about SSL record protocol payload in detail. [8+7]
- 7.a) Discuss about Markov model for the generation of guessable passwords.
- b) Explain the protocol context of SNMP with a neat diagram. [8+7]
- 8.a) Explain how the bastion host serves as a platform for an application –level or circuit –level gateway.
- b) Explain in detail about statistical anomaly detection. [8+7]

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