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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)**B.Tech IV Year I Semester Supplementary Examinations June-2024**  
**INFORMATION SECURITY**

(Computer Science &amp; Information Technology)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 a Discuss in detail about various types of Security attacks with neat diagrams. L6 6M  
b What is symmetric key cryptography? Discuss its advantages and limitations? L6 6M

**OR**

- 2 a Describe in detail about Conventional Encryption Model. L4 6M  
b Determine the security mechanisms required to provide various types of security services. L5 6M

**UNIT-II**

- 3 a Determine the GCD (24140, 16762) using Euclid's algorithm. L5 6M  
b Compare conventional encryption with public key encryption. L2 6M

**OR**

- 4 a What are the requirements and applications of public key cryptography? L1 6M  
b Discuss about Euler's theorem. L6 6M

**UNIT-III**

- 5 a List out applications of cryptographic hash functions. L1 6M  
b Explain the characteristics are needed in secure hash function. L2 6M

**OR**

- 6 a Compare different types of SHA algorithms with parameters. L2 6M  
b Discuss about the objectives of HMAC and its security features. L2 6M

**UNIT-IV**

- 7 a Enumerate the differences between Kerberos Version 4 and 5. L3 6M  
b Explain the authentication procedures defined by X.509 certificate. L3 6M

**OR**

- 8 a What is Public Key certificate? Explain its usage with X.509 certificates. L1 6M  
b What is Radix 64 format? What is its use in PGP? L3 6M

**UNIT-V**

- 9 a What are the different types of viruses? How do they get into the systems? L1 6M  
b Explain Intrusion detection in detail. L2 6M

**OR**

- 10 a Explain ESP Header of IPSec. L2 6M  
b What is meant by stateful packet inspection? What are the advantages and disadvantages? L2 6M

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