

**Subject Code: H4002/R13**

**M. Tech –II Semester Regular/ Supply Examinations, October, 2015**

**INFORMATION SECURITY**  
**(Common to IT, CS, CS&T and CS&E)**

**Time: 3 Hours**

**Max Marks: 60**

**Answer any FIVE questions**  
**All questions carry EQUAL marks**

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1. a. What is security mechanism? Briefly describe the relation between security services and mechanisms.  
b. Briefly describe a model for network security with the help of a neat diagram.
2. a. What are format string vulnerabilities? How they can be fixed and exploited.  
b. Briefly describe route table modification.
3. a. What is a symmetric encryption? Briefly describe the rules for secure use of symmetric encryption.  
b. Briefly describe HMAC.
4. a. Briefly describe the location of encryption devices.  
b. Compare and contrast the different conventional encryption algorithms.
5. a. Briefly describe about digital certificates and public key distribution of secret keys  
b. What are the design goals of Kerberos?
6. a. Describe in detail about combining security associations  
b. Briefly describe the applications of IPSec.
7. a. Briefly describe the involved steps in the SSL record protocol transmission  
b. Briefly describe the components of SET system.
8. a. Briefly describe the characteristics of firewalls  
b. What is SNMP? List the categories of SNMP.

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