JAYPEE UNIVERSITY OF INFORMATRION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION, September-2016
M.Tech.-Ist/B.Tech VIIth Semester (CSE/IT)

COURSE CODE: 10M1WCI131 MAX. MARKS: 15
COURSE NAME: System and Network Security Techniques
COURSE CREDITS: 03 MAX. TIME: 1.0 HR

Note: *All questions are compulsory; Carrying of mobile phone during examination will be treated as case of unfair means.*

Que:1. Explain the breach of following terms-
   a. Confidentiality
   b. Integrity
   c. Availability   **[03 Marks]**

Que:2. The access-control matrix could be used to determine whether a process can switch from, say, domain A to domain B and enjoy the access privileges of domain B. Is this approach equivalent to include the access privileges of domain B in those of domain A?   **[03 Marks]**

Que:3. Consider a system that generates 10 million audit records per day. Also assume that there are on average 10 attacks per day on this system and that each such attack is reflected in 20 records. If the intrusion detection system has true-alarm rate of 0.6 and a false alarm rate 0.0005, what percentage of alarm generated by the system correspond to real intrusion?

                                                                                   [03 Marks]

Que:4. How can systems that implement the principle of least privileges still have protection failures that lead to security violations?   **[02 Marks]**

Que:5. Make the list of six security concerns for a bank's computer system. For each item on your list, state whether this concern related to physical, human, or operating-system security with proper justification.   **[02 Marks]**

Que:6. Numerically explain the encryption and decryption of message, which is any integer number, using any of the standard cryptography algorithms.   **[02 Marks]**