**MIS 6330: IT Security**

**Prof. A. Lahiri**

**Individual Homework 4**

1. Briefly explain how *challenge-response* protocol helps in securing remote logons to computer systems.
2. Typical finger-print verification systems employed by the Federal Bureau of Investigations (FBI) can achieve 90% *probability of verification* at 1% *false accept rate*, but only 77% *probability of verification* at 0.01% *false accept rate*. Explain why, for biometric systems, the *probility of verification* is positively related to the *false accept rate*.
3. Define the following access control elements used in an Access Control List (ACL): *subject*, *object*, and *access right*.
4. How many *primary keys* and how many *foreign keys* may a table in a RDBMS system have? (Feel free to look up other textbooks, online sources, etc.)
5. What is *Role-based Access Control* (RBAC)? What are the advantages of RBAC over ACL?