

Q a) Information Security :- It is defined as the protecting information and information systems from unauthorized access, use, disclosure, disruption, modification or destruction.

Services provided by information security

- i) Confidentiality & It means information is not disclosed to unauthorized individuals, entities and process. For example if we say I have a password for my Gmail account but someone saw while I was doing a login into Gmail. In that case my password has been compromised and Confidentiality has been breached.
- ii) Integrity & It means maintaining accuracy and completeness of data. This means data cannot be edited in an unauthorized way. For example if an employee leaves an organization then in that case data for that employee in all department like accounts, should be updated to reflect status to JOB LEFT so that data is complete and accurate and in addition to this only unauthorized person should be allowed to edit employee data.
- iii) Availability & It means information must be available when needed. For example, if one needs to access info of a particular employee to check whether employee has outstanding the number of leaves, in that case

it requires collaboration from different organizational teams like network operations, development operations, incident response and policy change management.

b) Guideline for Secure Passwords

⇒ Things To Do & i) Use at least 8 characters, the more characters the better the password

ii) Use a random mixture of characters, upper and lower case, number, punctuations, spaces and symbols.

iii) Don't use a word found in a dictionary, English or foreign.

iv) Never use the same password twice.

⇒ Things Not To Do & i) Don't just add a single digit or symbol before or after a word. E.g. "ABC1".

ii) Don't double up a single word. E.g. "ABCABC".

iii) Don't simply reverse a word. E.g. "egnamo".

iv) Don't just ~~remove~~ the vowels. E.g. "nng".

v) Key sequences that can easily be repeated. E.g. "qwerty", "asdf", "zxcv" etc.

vi) Don't just garble letters. E.g. converting E to 3, L or I to 1, O to 0.