

**Solved IGNOU MCS 22 assignment question 1 of 2018-19 session - Write the purpose of VPN and name the VPN technologies supported by Windows 2000.**

## Solved MCS 022 Assignment Question 1(A)

### Purpose of VPN

VPN stands for Virtual Private Network. A VPN uses tunneling to transfer data in a VPN using dedicated lines or dial up lines. A VPN mimics the properties of a dedicated private network through internet; allowing data transfer between two computers in a network.

VPN's tunneling is a secure method of using an internetwork infrastructure to transfer a payload. A tunneling protocol comprises of tunnel maintenance protocol and tunnel data transfer protocols.

The two basic types of VPN are:

1. Voluntary tunnels
2. Compulsory tunnels

VPN management involves managing addresses, server access, authentication and encryption. Troubleshooting VPN involves checking connectivity, remote access connection establishment, routing and IPSec.

### VPN Technologies Supported by Windows 2000

Windows 2000 supports the following VPN technologies.

1. Print to Print Tunneling Protocol (PPTP)
2. Layer 2 Transfer Protocol (L2TP)

## Answer of MCS 22 Question 1(B)

**List the main contents of Password files and where are they located in Windows? Also, explain the concept of Shadow passwords? (5 Marks)**

Following are the main contents of password files:

1. Username - Stores login name ie username.
2. Information used to validate a user's password
3. User Identifier number which is used by the operating system for internal purpose.
4. Group identifier number, which identifies the primary group of the user.
5. Gecos field, commentary that describes the person or account.
6. Path to the user's home directory.
7. Program that is started every time the user logs into the system.

In Windows, the password is stored in C:\Windows\system32\SAM.

## Shadow file

Shadow file is used to increase the security level of the password by restricting all but highly privileged user's access to hashed password data. Typically, that data is kept in files owned by and accessible only by the super user.