Computer Networks
2nd Year, 1st Semester

Tutorial 3 – VLSM and IPv6

01. An ISP supplies a class C network of 195.100.50.0 to an enterprise that requires 5 networks each to support 12 users and 4 networks supports 2 usable ip addresses.

    a. What is the subnet mask that would be configured in each workstation ?
    b. Identify the sub-network addresses.
    c. Calculate the WAN Link addresses.

02. 132.16.128.0/17 main network need to be separated into subnetworks based on the following requirements.

    a. 3 subnets with 25 devices each.
    b. 4 WAN links to inter-connect the sub networks

03. An ISP supplies a class B network of 136.210.0.0 to an enterprise that requires ten networks each to support 110 users. What is the network mask that would be configured in each workstation and what would be the NetID, Subnet Number ?

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04. Calculate the EUI-64 interface ID for IPv6 address for the following device MAC addresses.
    a. 3463:adad:adad
    b. 2C55:CAFE:ABCD

05. Write the simplified version of the following IPv6 addresses.
    a. 2001:0db8:85a3:0000:0000:8a2e:0370:7334
    b. 2001:0000:85a3:0000:0000:8a2e:0370:7334

06. Calculate the original IPv6 address of the following compressed IPv6 addresses.
    a. 52:8d30:0:2345::190
    b. a052:30::3567:0:0:cd9
    c. a052:30:3:40:3567:5640::