Introduction to Computer Networks

Example exam LO3

	Minimum Learning Outcome (MLO)	Desirable Learning Outcome (DLO)	TOTAL
LO3 40 min	15	5	20

Learning outcome 3 – minimum learning outcome 15 points, desired learning outcome 5 points

1. **[MLO 3, 3 pts] C**alculate subnets for the user as requested. You must specify a subnet mask for each network, Network address, and broadcast IP address for every network. Use class B of private networks.

   Requirements:
   Location A=100 devices
   Location B=200 devices
   Location C=300 devices
   Location D=400 devices
   Location E=500 devices

2. **[MLO 3, 2 pts]** Specify the **binary** and **decimal** form of the subnet mask for the given prefixes.
   /11, /17, /20, /28

3. **[MLO 3, 3 pts]** Given network for subnetting is 172.16.0.0/24. Calculate the 7th network in order if we use the /28 subnet mask for subnetting.

4. **[MLO 3, 3 pts]** Determine the summary address and subnet mask for the following networks.
a) 172.16.1.0/22
b) 172.16.5.0/26
c) 172.16.15.0/29
d) 172.16.22.128/25
e) 172.16.33.0/25

5. **[MLO 3, 4 pts]** Based on the given IP address, determine the network address and broadcast address in each network.
a) 10.0.20.3/23
b) 10.10.0.101/24
c) 172.20.20.25/25
d) 172.30.15.19/26