QPCODE 2073510704 Reg.No

DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester:VII **351CS107 ADVANCED NETWORKING**

Time: 3:00 Hours **Max. Marks: 100**

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) Draw the IP header and explain at least FOUR fields of the IP header.**(10 Marks)**
   b) You have two rooms with computers that need to be subnet .Room A with 100 Pcs and Room B with 50 PCs Given the IP addresses from 168.132.9.0 – 168.132.9.255 find the find the range of IP addresses and the Mask for Room A and for Room B.**(10 Marks)**
2. a) Explain datagram fragmentation in computer networks.**(10 Marks)**
   b) Describe the purposes of ARP (Address Resolution Protocol) and RARP (Reverse ARP) in computer networking.**(10 Marks)**
3. a) Describe IP routing and briefly describe the TWO main types of routing.**(10 Marks)**
   b) Explain the states of OSPF routing protocol.**(10 Marks)**
4. a) Describe the DHCP server and the DHCP process.**(10 Marks)**
   b) Describe Domain Name System and how it works?**(10 Marks)**
5. a) Describe SNMP and state at least THREE SNMP messages.**(10 Marks)**
   b) Describe mobile IP and explain THREE of its mechanisms.**(10 Marks)**
6. a) With the aid of a clear diagram explain concept of internetworking.**(10 Marks)**
   b) Describe subnetting in computer networks and its benefits.**(10 Marks)**
7. a) Define Internet Control Message Protocol and describe TWO types of ICMP messages. **(10 Marks)**
   b) State five differences between ARP and RARP.**(10 Marks)**