TRIBHUVAN UNIVERSITY

FACULTY OF MANAGEMENT

Office of the Dean

January 2021

Full Marks: 60

Pass Marks: 30

Time: 1.5 hrs.

BIM / Fifth Semester / IT 223: Advance Internetworking

Candidates are required to answer the questions in their own words as far as practicable.

[6 × 10 = 60]

Attempt any SIX Questions:

1. A datagram of 4,400 bytes arrives to a router, and this datagram must be forwarded to a link with a MTU of 1600 bytes. Suppose that the original datagram is stamped with an identification number of 123. How many IP fragments are transmitted and what is the offset and IP payload length of each fragment?

2. IP multicast address to Ethernet multicast address mapping is not unique. What implication does this have on the IP? Map IP multicast Address 230.227.254.199 with Ethernet Multicast address.

3. If you are assigned an IP address 11.12.13.0/26 and asked to deploy CIDR. Here are some requirement which you have to fulfill for Subnet A = 25 Hosts and Subnet B = 5 Hosts, You are also required to calculate subnetmask, range, netid, broadcast id for each subnet.

4. Convert given MAC address into IPv6 address

    MAC address: FE: B0:10:BA:AC: DC

    IPv6 Network ID: ABCD::/64

5. Illustrate with an appropriate figure how Multimedia from Streaming Server is streamed in clients' media player?

6. How OSI reference Model can be mapped with TCP/IP? Explain.

7. Define QoS (Quality of Service) and explain its parameters

8. Explain the differences among DCCP, TCP and SCTP.

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