

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT

Office of the Dean

April - May 2017

Full Marks: 40

Time: 2 hrs.

BIM / Fifth Semester / IT 223: Advance Internetworking

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

Group "A"

1. Brief Answer Questions:

[10 × 1 = 10]

- i. Define RSVP.
- ii. What is multi homing?
- iii. What do you mean by node to node connection?
- iv. Write down the disadvantages of static routing.
- v. Write aggregated address of 10.10.10.0/24, 10.10.11.0/24 and 10.10.12.0/24.
- vi. What is a half connection?
- vii. Define IGMP.
- viii. What is a Virtual Circuit?
- ix. Define delay jitter.
- x. List the differences between TCP and UDP.

Group "B"

Exercise Problems:

[5 × 4 = 20]

2. Differentiate Multicast with Multiple Unicast. Change the multicast IP address 238.212.24.199 to an Ethernet multicast address.
3. Identify the first six /49 address blocks out of ABCD::/32
4. Assume a link layer protocol, called Newnet with MTU 1600 bytes. A TCP segment with 7540 bytes of user data is to be sent over Newnet link. There are 20 bytes of IP options involved. How many IP fragments are transmitted and what is the offset and IP payload length of each fragment?
5. Illustrate count to infinity problem and its solution.
6. How forward error correlation and interleaving recovers lost multimedia packet? Explain with figures.

Group "C"

Comprehensive Questions:

[2 × 5 = 10]

7. Define congestion. Explain closed loop and open loop approach for congestion control.
8. List the differences between IPv4 and IPv6. Explain the transition mechanism from IPv4 to IPv6.

