TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
Aug - Sept 2017

BIM / Second Semester / ITC 214 / IT 214: Data Communication and Computer Network

Candidates are required to answer all the questions in their own words as far as practicable. The figures in the margin indicate the full marks.

Group "A"

1. *Brief Answer questions:* [10 × 1 = 10]

    i. Which is the most vulnerable component in basic data communication model and why?

    ii. What are the advantage and disadvantage of guard band in frequency division multiplexing?

    iii. Define the process segmentation in Transport Layer.

    iv. Define Frame Synchronization.

    v. Compare between 10Base-5 and 10Base-T.

    vi. Why a routing algorithm should have a property of rapid convergence?

    vii. When a "source quench" and "Time exceeded" messages are generated?

    viii. Mention the advantage of ISDN over ADSL.

    ix. What is the similarity between IP and UDP?

    x. What is the advantage of IMAP over POP?

Group "B"

Short Answer Questions: [5 × 3 = 15]

2. Explain Digital Signal Encoding with its types.

3. Explain any one error detection method with example.

4. Explain the procedures that are involved in routing of information using BGP.

5. Explain the working principle of Distance vector routing algorithm with an example.

6. What is DHCP? Explain the types of IP allocation using DHCP.

Group "C"

Long Answer questions: [3 × 5 = 15]

7. Identify and explain flow control protocol with its types.

8. Write the importance of super-netting. Find a summarized route and a common subnet mask if a router has the following mentioned networks in its routing table.

    198.132.98.0

    198.132.99.0

    198.132.100.0

    198.132.101.0

    198.132.105.0

9. Define Transport Layer. Explain the services provided by transport layer.

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