Bachelor Level / fourth-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC258)** Pass marks: 24 (Computer Networks) Time: 3 hours Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group A

Long Answer Questions:

Attempt all questions. (2x10=20)

1. What is protocol? Why do we need layered protocol architecture? Explain each layer of OSI protocol architecture in detail.

OR

How does the transport layer support flow control? Discuss TCP as a transport layer protocol along with its segment structure. 2. Discuss the importance of routing algorithms. Discuss distance vector routing algorithm. Compare it with link state routing.

Group B

Short answer Questions:

Attempt any eight questions. (5x8=40)

3. Explain connectionless service. How is it different from connection oriented service?

4. How does multiplexing increase transmission efficiency? Explain.

5. What is FTP? Differentiate it with HTTP.

6. Assume a class C network and divide it into eight subnets. What is the value of a new subnet mask?

7. Differentiate between ATM and frame relay.

8. Discuss about streaming audio and video.

9. Discuss the infrastructure for network management.

10. What is multicast routing? Discuss.

11. Write short notes on:

      a. DNS

      b. IPv6