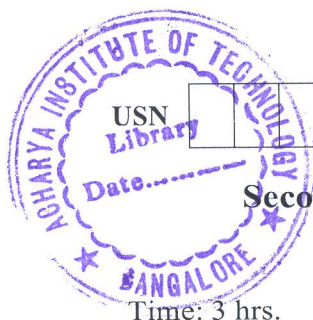


CBCS SCHEME

18MCA24



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Second Semester MCA Degree Examination, Jan./Feb. 2021

Computer Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is application? Explain classes of applications of computer network. (10 Marks)
- b. How process communicating over an abstract channel works? Explain with a diagram. (10 Marks)

OR

- 2 a. What is scalable connectivity? Explain with a neat diagram switched network. (10 Marks)
- b. How multiplexing multiple logical flows over a single physical link with a diagram? (10 Marks)

Module-2

- 3 a. Explain with a neat diagram, Service Interface and Peer Interfaces. (10 Marks)
- b. Which are the requirements and needs for a network? Explain. (10 Marks)

OR

- 4 a. Explain with a neat diagram of OSI-7 layer model. (10 Marks)
- b. How high level messages are encapsulated inside of low-level messages? (10 Marks)

Module-3

- 5 a. Explain with a neat diagram of network with two autonomous systems. (10 Marks)
- b. Briefly explain dynamic host configuration protocol. (10 Marks)

OR

- 6 a. Explain with a neat diagram forwarding packets from a correspondent node to a mobile node. (10 Marks)
- b. Explain the concept of 3 ways of handle headers in source routing. (10 Marks)

Module-4

- 7 a. Explain with a neat diagram of UDP message queue. (10 Marks)
- b. How TCP manages a byte stream? Explain. (10 Marks)

OR

- 8 a. Explain with a neat diagram TCP state transition. (10 Marks)
- b. Explain relationship between TCP send buffer. (10 Marks)

Module-5

- 9 a. Explain symmetric key encryption and decryption. (10 Marks)
- b. Explain authentication using public keys. (10 Marks)

OR

- 10 a. Explain sequence of mail gateways to store and forward email messages. (10 Marks)
- b. Explain domain hierarchy with an example. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.