Time: 3 hrs

enth Semester B.E. Degree Examination, June/July 2023

**Computer Networks** 

Max. Marks: 100

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

# Module-1

- Define what is data communication. Write and explain components of a data communication 1
  - Mention and explain different formats used to represent information in data communication. (10 Marks)

- Explain different data flow techniques used for communication between two devices.
  - (10 Marks) With layer diagram, explain the responsibility of each layer in OSI model. (10 Marks)

## Module-2

- Explain the need for protocol layering. What are its advantages. (10 Marks) 3
  - With neat sketch, explain encapsulation and decapsulation. (10 Marks)

- Define and explain the following terms:
  - Framing i)
  - ii) Flow control
  - iii) Error control.
  - What is piggybacking? Explain concept of piggybacking with neat diagram.

### Module-3

- What is Controlled Access? Explain different control access methods. (10 Marks)
  - A slotted ALOHA networks transmits 200 bit frame on a shared channel of 200 Kbps. Find the through put, if the system produces
    - i) 1000 frames per second
    - ii) 500 frames per second
    - iii) 250 frames per second.

(10 Marks)

(09 Marks)

(11 Marks)

## OR

- Explain different forwarding techniques used to forward the packets from source to (10 Marks) destination. (10 Marks)
  - What is address space? Explain different classes IP addresses.

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Module-4

7 a. Write a note on security of IPV4 datagrams.

b. With suitable diagram explain distance vector routing.

(10 Marks)

(10 Marks)

OR

8 a. Explain the services provided by transport layer to the upper layer.

b. Explain stop and wait ARQ protocol.

(10 Marks)

Module-5

9 a. Explain TCP UDP datagram.

b. Explain TCP connection establishment and connection termination.

(12 Marks)

(08 Marks)

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OR

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10 a. Explain how application layer protocol interacts with End – user applications.
b. Explain working of any one applications layer protocol.

(10 Marks)

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