

R18

Code No: 154CG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, February - 2024

COMPUTER NETWORKS
(Common to CSE(CS), CSE(N))

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

- 1.a) What are the key components of a network software? [2]
- b) What are the factors to be considered while selecting a transmission media? [3]
- c) What is data link layer switching? [2]
- d) What do you mean by simplex protocol? [3]
- e) What is Multicasting? [2]
- f) What are the different types of routing algorithms? [3]
- g) What is Congestion? [2]
- h) List out the services of Transport layer. [3]
- i) What is audio streaming? [2]
- j) What are the benefits of application layer? [3]

PART – B

(50 Marks)

- 2.a) Explain about the structure of an internet.
- b) Explain about the coaxial cable with neat sketch. [5+5]

OR

- 3.a) Explain the types of Network Hardware which are used in computer networks.
- b) What are the advantages and disadvantages of Fibre Optic cable? [5+5]

- 4.a) What are the services of Data link layer?
- b) Explain about the Selective Repeat protocol with an illustrative example. [5+5]

OR

5. Explain about the different types of Collision free protocols. [10]

- 6.a) Explain about the Hierarchical routing algorithm with an example.
- b) Differentiate between broadcast and multicast communication in the network layer. [5+5]

OR

- 7.a) Explain the requirements of internetworking.
- b) Explain about the token bucket algorithm. [5+5]

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8. What is multiplexing and de-multiplexing and why it is required? Discuss the working with respect to connection oriented and connectionless with an example. [10]

9. Explain about the Three way handshake criteria for connection establishment and termination in TCP. [10]

10.a) Enumerate Domain Name Service (DNS) and explain in detail about the domain hierarchy and name servers.

b) Explain about HTTP request header. [5+5]

11.a) Explain about the components of the SNMP management model.

b) What is jitter? What is its role in video streaming? [5+5]

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