

Code No: 155AN**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, August - 2022****COMPUTER NETWORKS****(Computer Science and Engineering)****Time: 3 Hours****Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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- 1.a) What is the importance of layered architecture in network models? Discuss in detail.
b) Differentiate between TCP/IP network model and ISO-OSI reference model. [7+8]
- 2.a) Discuss about Network hardware components in detail.
b) What are the advantages of fiber optic cables? Explain with a neat sketch. [7+8]
- 3.a) What are the design issues of Data Link Layer? Explain in detail.
b) Compare and contrast CSMA/CD and CSMA/CA for channel allocation. [7+8]
4. What are various types of Error Detection methods? Explain about Cyclic Redundancy Check Error Detection Method with suitable example. [15]
- 5.a) Define Routing. Explain Distance Vector Routing Algorithm with an example.
b) What are the advantages and limitations of flooding? [9+6]
- 6.a) Describe link state vector routing algorithm example.
b) How to achieve quality of service using leaky bucket algorithm. [7+8]
- 7.a) Explain connection management in transport layer.
b) Compare and contrast TCP and UDP Protocols. [7+8]
- 8.a) What are the major components in E-mail system? And explain the role of SMTP for sending and receiving messages.
b) Discuss about HTTP request and response mechanisms. [8+7]

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