

R18

Code No: 154CG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year II Semester Examinations, August/September - 2022

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

Time: 3 Hours

Max.Marks:75

Answer any five questions
All questions carry equal marks

- 1.a) Compare and contrast the OSI and TCP/IP reference models.
- b) Explain the functions of the following network hardware devices:
i) Hub ii) Bridge iii) Router iv) Gateway [7+8]
- 2.a) Explain about various transmission media in physical layer with a neat sketch.
- b) Write any four reasons for using layered protocols. [10+5]
- 3.a) What are the different types of error detection methods? Explain the CRC error detection technique using generator polynomial x^4+x^3+1 and data 11100011.
- b) What are the functions of medium access sub layers? Explain. [10+5]
- 4.a) What is the purpose of CSMA CD? Explain.
- b) Elaborate on the design issues of data link layer. [8+7]
- 5.a) Describe Dijkstra shortest path algorithm. Also show working of Dijkstra algorithm with the help of an example.
- b) Describe congestion control in datagram subnets. [10+5]
- 6.a) What is classful addressing? Discuss class A, class B, class C, class D, class E address with its range in decimal dotted notation and example.
- b) Elucidate the special IP addresses used in internet. [10+5]
- 7.a) Discuss the elements of Transport layer protocol.
- b) Explain the types of Transport layer Services. [10+5]
- 8.a) Describe DNS with diagrams and real-time examples.
- b) What are the three elements of SNMP? Explain. [10+5]

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