

Y19AIT405

II/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

August, 2021

Fourth Semester

Time: Three Hours

Information Technology

Computer Networks

Maximum: 50 Marks

Answer Question No. 1 Compulsorily.

(10X1 = 10 Marks)

Answer ANY ONE question from each Unit.

(4X10=40 Marks)

1. a) Define computer Networks CO1
- b) What are two reasons for using layered protocols? CO1
- c) A bit string, 011110111110111110, needs to be transmitted at the data link layer. What is the string actually transmitted after bit stuffing? CO1
- d) Give two example computer applications for which connection-oriented service is appropriate. CO2
- e) The IP address 1.0.0.0 to 126.0.0.0 belongs to which class. CO2
- f) In a TCP segment, what does a sequence number identify? CO3
- g) Differentiate UDP and TCP. CO3
- h) What is the use of RPC? CO3
- i) What are resource records? CO4
- j) What are static web documents? CO4

Unit - I

2. a) Given the dataword 101001111 and the divisor 10111, show the generation of the CRC codeword at the sender site. CO1 5M
- b) Explain about communication model with diagram. CO1 5M

(OR)

3. a) What is the principal difference between connectionless communication and connection-oriented communication? CO1 5M
- b) Compare OSI & TCP/IP models. CO1 5M

Unit - II

4. a) Describe a way to reassemble IP fragments at the destination. CO2 5M
- b) Differentiate closed loop & open loop congestion control algorithms. CO2 5M

(OR)

5. a) Explain the QOS parameters used to improve the performance of networks. CO2 5M
- b) Explain about hierarchical routing. CO2 5M

Unit - III

6. a) What are Berkley sockets? How are they used in TL? CO3 5M
- b) Explain TCP header with neat diagram. CO3 5M

(OR)

7. a) Explain Connection establishment in TCP. CO3 5M
- b) Explain various timers used by TCP. CO3 5M

Unit - IV

8. What is the role of DNS in internet? How can we resolve name to IP address using DNS. CO4 10M

(OR)

9. Explain about E-Mail architecture in detail. CO4 10M