Sem V (R-2019 C Scheme) "Al & DS" May'23

3/5/23

Time: 3 hours

Max. Marks: 80

N.B. (1) Question one is Compulsory.
(2) Attempt any 3 questions out of the remaining.
(3) Assume suitable data if required.

Q.1	a)	List and describe the different network connection topologies.	05
	b)	Describe the different guided transmission medias used in the network	05
	c)	What is subnetting? What are the default subnet mask?	05
	d)	Explain Three Way Handshaking for connection establishment in TCP.	05

Q2 a) Describe in detail OSI reference model with a neat diagram   10

b) A bit stream 10011101 is transmitted using standard CRC method. The   10 generator polynomial is $X^3 + 1$.
i) What is the actual bit stream transmitted?
ii) Verify that receiver had received the correct bit stream.

Q3 a) Compare and contrast between   10
      i) IPv4 vs IPv6
      ii) Connection oriented protocol vs Connectionless protocol

b) Explain in brief Cisco PPDIOO Network design Methodology   10

Q4 a) Write notes on DNS and Explain components on DNS.   10

b) What is Routing? What are desirable characteristics of routing algorithms?   10 Explain distance vector routing with suitable example

Q5 a) What is SDN? Explain the concept of control plane and data plane with   10 respect to SDN

b) Elaborate Cisco SONA Architecture in detail   10

Q6 Write a short note on
a) Sliding Window Protocol   05
b) OpenFlow messages   05
c) NAT   05
d) DHCP   05

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