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Question Paper Code: 54806

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Fourth Semester

Information Technology

15UIT406- COMPUTER NETWORK

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Frames from one LAN can be transmitted to another LAN via the device CO1- R
(a) Router (b) Bridge (c) Repeater (d) Modem
2. What is the default subnet mask for a class C network? CO2- R
(a) 127.0.0.1 (b) 255.0.0.0 (c) 255.255.0.0 (d) 255.255.255.0
3. Which of the following conditions is used to transmit two packets over a medium at the same time? CO3- R
(a) Contention (b) Collision (c) Synchronous (d) Asynchronous
4. The main difference between TCP and UDP is CO4- R
(a) UDP is connection oriented where as TCP is datagram service
(b) TCP is an Internet protocol where as UDP is an ATM protocol
(c) UDP is a datagram where as TCP is a connection oriented service
(d) All of the above
5. What protocol is used between E-Mail servers? CO5- R
(a)FTP (b)SMTP (c) SNMP (d) POP3

PART – B (5 x 3= 15Marks)

6. Describe the perspective requirements for building a network? CO1- R
7. Describe the physical properties of Ethernet. CO2- R
8. List some routing algorithms CO3- R
9. Distinguish between connection-less and connection-oriented protocol in transport layer. CO4- R
10. Write short notes on Internet Message Access Protocol (or) IMAP. CO5- R

PART – C (5 x 16= 80Marks)

11. (a) Examine in detail the layers of OSI model with a neat diagram CO1-App (16)
Or
(b) Identify the factors that affect performance of the network. CO1- App (16)
12. (a) Discuss in detail about Stop and Wait protocol with suitable diagram CO2- App (16)
Or
(b) Examine the working principle of CSMA/CD and how it affects the collision domain in ethernet. CO2- Ana (16)
13. (a) Discuss about Distances vector routing with illustrations. CO3- Ana (16)
Or
(b) Discuss the notation, representation and address space of IPv6. CO3- Ana (16)
14. (a) (i) Critically examine the different fields in the TCP Segment. CO4- U (10)
(ii) Draw the up segment format and tell the necessity for checksum field. CO4- U (6)
Or
(b) Define Congestion. Explain TCP congestion control mechanisms in detail. CO4- Ana (16)
15. (a) What is hypertext? Explain World Wide Web and HTTP protocol in details CO5- U (16)
Or
(b) What is the need for DNS? Explain the role of DNS on a computer network CO5- U (16)