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Question Paper Code: 31852

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fifth Semester

Information Technology

01UIT502 – COMPUTER NETWORKS

(Common to Computer Science and Engineering)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. In a network with 5 devices find the total number of cable links required for (a) mesh topology (b) star topology.
2. Define flow control. Mention the categories of it.
3. Describe about MAC.
4. What is piconet?
5. What is meant by packet switching?
6. Mention the uses of ARP and RARP protocols.
7. Name the different fields in pseudo header.
8. List the uses of UDP.
9. State the function of SMTP.
10. Define URL.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Distinguish between single bit error and burst error. Which of these errors is more likely to occur in data transmission? Justify your answer. (8)
- (ii) Explain flow control mechanisms. (8)

Or

- (b) Draw the OSI Network architecture and explain the functionalities of each layer in detail. (16)
12. (a) Explain in detail about CSMA/CD and CSMA/CA. (16)

Or

- (b) (i) Explain in detail the architecture and addressing mechanism of IEEE 802.11. (8)
- (ii) Illustrate how RTS/CTS signals can be used to overcome the hidden terminal problem. (8)
13. (a) (i) Explain in detail various error reporting and query messages of ICMP. (8)
- (ii) Compare and contrast circuit switching and packet switching networks. (8)

Or

- (b) Explain distance vector routing and link state routing. (16)
14. (a) Explain UDP and TCP. (16)

Or

- (b) Why does congestion occur in a network? Explain in detail about one congestion control technique. (16)
15. (a) Explain in detail about RSA algorithm with suitable example. (16)

Or

- (b) (i) Illustrate the classification of firewalls. (10)
- (ii) Illustrate how FTP differs from client server application. (6)
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