Roll No. | | | | | | | | | | |

B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014

INFORMATION TECHNOLOGY

FIFTH Semesters

IT9303/IT374 COMPUTER NETWORKS

(Regulation 2008)

Time: 3 Hours | Answer ALL Questions | Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are some of the physical media that Ethernet can run over?
2. What advantages does TDM have over FDM in a circuit-switched network?
3. Define character stuffing.
4. What are the popular CRC polynomials?
5. Define the term OSPF.
6. What are subnetting.
7. Define the UDP checksum structure.
8. What are the approaches to congestion control?
9. State the general format of an HTTP request message.
10. What is POP3?

Part – B (5 x 16 = 80 marks)

11. What are the five layers in the internet protocol stack? What are the principal responsibilities of each of these layers? (8)
    Explain the hybrid multi access techniques. (8)

12. a) i) Explain the sliding window protocol with example. (8)
    ii) Distinguish between bridges and switches. (8)

    (OR)

    b) i) Why might a wireless mesh topology be superior to a base station topology for communication in natural disaster? (8)
    ii) Explain the Ethernet media access control algorithm. (8)

13. a) i) Explain the congestion avoidance in network layer with example. (8)
    ii) Distinguish between ARP and RARP. (8)

    (OR)

    b) i) Explain the DHCP protocol. (8)
    II) Distinguish between circuit switching and packet switching. (8)

14. a) i) Describe why application developer might choose to run an application over UPD rather than TCP. (8)
    ii) State and explain the algorithm of queuing disciplines. (8)

    (OR)

    b) i) What are the issues in resource allocations? (8)
    ii) Explain the TCP connection management with flow diagram. (8)

15. a) i) Distinguish between FTP and TFTP. (8)
    ii) What problem would a DNS-based redirection mechanism encounter if it wants to select an appropriate server based on current load information? (8)

    (OR)

    b) i) Explain the relationship between uniform resource locators and uniform resource identifiers. Give an example of a URI that is not a URI. (8)
    ii) Discuss and compare SMTP with HTTP. (8)