2008 ANNA UNIVERSITY
B.E/B.TECH DEGREE EXAMINATIONS
COMPUTER NETWORKS
(COMPUTER SCIENCE&ENGINEERING)

TIME-3HOUR
MARKS-100

ANSWER ALL QUESTIONS

1. For n devices in a network, what is the number of cable links required for a mesh, ring, bus and star topology?

2. What does the Shannon capacity have to do with communications?

3. How does a single-bit error differ from a burst error?

4. Compare a piconet and a scatter net.

5. What are the differences between classful addressing and classless addressing in IPV4?

6. Is the size of the ARP packet fixed? Explain.

7. Do port addresses need to be unique? Why of why not?

8. How are congestion control and quality of service related?

9. What are the two main categories of DNS messages?

10. How is HTTP similar to SMTP**?**   **[10*2=20]**

11.(a) Discuss briefly about the layers present in the OSI model.
                    OR
(b) (i) Discuss briefly about the line coding process used for converting digital data to digital signals.

 (ii) Write a short note on transmission media.

12.(a) (i) With an example, illustrate how CRC encoder and decoder will work.

(ii) Compare and contrast the Go-Back-N ARQ protocol with selective repeat ARQ.
                    OR
(b) (i) Discuss in detail about the wireless LAN MAC sub layers.

(ii) Discuss briefly about the high speed networks.

13.(a) Discuss in detail about the OSPF routing protocol.
                    OR
(b) (i) Discuss briefly about the network address translation.

(ii) Define fragmentation and explain why the IPV4 and IPV6 protocol need to fragment some packets.

14. (a) How the connection is established using three-way handshaking, explain in detail?
                    OR
(b) (i) Discuss briefly about the techniques used to improve QoS.

(ii) Discuss about the Intserv, a flow-based QoS model.

15. (a) (i) Discuss briefly about the DNS in the internet.

(ii) Discuss briefly about the file transfer protocol.   **[16*5=80]**