Register Number: ……

B.TECH. DEGREE EXAMINATIONS: NOV/DEC 2010

Fourth Semester

INFORMATION TECHNOLOGY

U07CS502: Computer Network

Time: Three Hours **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 1 = 10 Marks)

1.Which topology requires a central controller or hub?

a)Mesh b) star c) bus d) ring

2. Node to Node delivery of the data unit is the responsibility of the ---------- layer.

a) Physical b) Data link c) Transport d) Network

3. ARQ stands for ----------

a) Automatic Repeat Quantization b) Automatic Repeat Request

c) Automatic Retransmission Request d) Acknowledge Repeat Request

4. IEEE project 802 divides the data link layer into an upper -------- sublayer and a lower ------- sublayer.

a)LLC,MAC b)MAC,LLC c)PDU,HDLC d) HDLC,PDU

5. Which of the following is the default mask for the address 98.0.46.201?

a)255.0.0.0 b) 255.255.0.0 c) 255.255.255.0 d) 255.255.255.255

6. In which routing method do all the routers have a common database?

a) Distance vector b) Link state c) Dijkstar d) Vector link

7. Which types of multiplexing has multiple paths?

a) FDM b) Asynchronous TDM c) Synchronous TDM d) Inverse multiplexing

8.The FECN informs the ---------- of congestion while the BECN informs the ---------- congestion

a)destination; interface b)destination; sender c) sender; destination d)interface; sender

9. In public key encryption, the private key is used for ------

a)encryption b) decryption c) hashing d) a and b

10. During an FTP session, the data connection is opened -------

a) Exactly once b) Exactly twice c)As many times as necessary d) all of the above

PART B (10 x 2= 20 Marks)

11. How full duplex modes differ from half duplex mode?
12. What is multidrop connection?
13. Differentiate flow control and error control?
14. What does project 802 have to do with the physical layer of the OSI model?
15. Which is more efficient, circuit switching or virtual circuit switching? why?
16. What are the three major multiplexing techniques?
17. What are the BECN bit inform the sender of congestion in the network?
18. Define three way handshake.
19. What are two main categories of DNS message?
20. What kinds of file types can TFTP transfer?

PART C (5 x 14=70 Marks)

21. a) Explain the layers of OSI model in detail. **(OR)**
    b) (i)What is guided media and explain any two types. (7)
    (ii) Write the categories of addresses used in internet employing TCP/IP. (7)

22.a) (i) In detail, explain sliding window protocol. (7)
    (ii) Explain selective repeat ARQ protocol. (7)
    (OR)
    b) (i)Discuss IEEE 802.11. Compare IEEE 802.3 IEEE 802.4 and IEEE 802.5 (7)
    (ii) What is FDDI and Explain in detail? (7)

23. a) (i) What are the types of packet switching approaches? Explain in detail. (10)
    (ii) Write a note on IP addressing. (4)
    (OR)
    b) (i) Explain in detail about distance vector routing. (7)
    (ii) Briefly explain the concepts of link state routing. (7)

24. a) (i) What is UDP? Explain its operation in detail. (10)
    (ii) Write a note on various features of TCP. (4)
    (OR)
    b) In detail explain four common methods to improve QOS.

25. a) (i) Explain in detail about the DNS mechanism. (7)
    (ii) Briefly explain about the SMTP protocol. (7)
    (OR)
    b) (i) Explain in detail about HTTP protocol. (7)
    (ii) Write notes on Encryption and Decryption of messages. (7)

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