M.E. DEGREE EXAMINATIONS: OCTOBER / NOVEMBER - 2008

Third Semester

POWER ELECTRONICS AND DRIVES

P07PEE02: Computer Communication And Networks

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions: -

PART – A (20 x 1 = 20 Marks)

1 The standard for wireless LANs is

a) IEEE 802.2   b) IEEE 802.5   c) IEEE 803.11   d) IEEE 802.10

2 Which sub layer interfaces to the actual cable

a) ATM Adaptation   b) Transmission convergence   c) Convergence

d) Physical Medium Dependent

3 The user take turns in a round robin fashion, each one gets the entire bandwidth for

a little burst of time

a) Time Division Multiplexing   b) Frequency Division Multiplexing

c) Wavelength Division Multiplexing d) Phase Division Multiplexing

4 The most commonly used transmission medium is

a) Optical fiber b) Coaxial cable c) UTP d) STP

5 The technique used by the Link state routing is

a) flooding   b) next hop   c) random numbers   d) timely delivery

6 The file of 100,000 characters is broken into 1200 characters. Assume that 48

overhead bits are sent along with each block. The time taken to send overhead bits

a) 0.83 seconds b) 20.83 seconds   c) 0.40 seconds   d) 0.41 seconds

7 Which topology uses multipoint philosophy?

a) Mesh b) Ring c) Bus   d) Hybrid

8 The 'do not fragment' flag containing a zero indicates that the datagram

a) must be fragmented b) must not be fragmented c) may be fragmented

d) is already fragmented

9 In which protocol, the sender sends one frame and waits for an acknowledgement

from the receiver before sending the next frame

a) stop-and-wait   b) go back n   c) sliding window   d) CRC

10 An Ethernet address can be

   a) Unique   b) duplicated   c) optional   d) never duplicated

11 The minimum value for a logical channel group is

   a) 16   b) 32   c) 25   d) 1024

12 The maximum number of class B networks is

   a) 6480   b) 12808   c) 25610   d) 16384

13 In M/M/1 queuing system, the average number of customers in the system

   a) $N = m\rho + \dfrac{\rho P_Q}{1-\rho}$ b) $N = \dfrac{\rho}{1-\rho}$ c) $N = \dfrac{\rho^2}{1-\rho^2}$ d) $N = \dfrac{1-\rho}{\rho}$

14 In M/G/1 queuing system, the utilization factor is

   a) $\rho = \dfrac{\lambda}{\mu}$ b) $\rho = \dfrac{\lambda}{m\mu}$ c) $\rho = \dfrac{\lambda^2}{\mu}$ d) $\rho = \dfrac{\lambda^2}{m\mu}$

15 In any queuing system, the Markov chains are called birth-death processes, when the transitions can occur only between

   a) j to j-1, j or j+1   b) j+1 to j   c) j-1 to j   d) j-1 to j+1

16 The browser fetches the article from its preconfigured news site by using the

   a) HTTP   b) FTP   c) news   d) NNTP

17 The Key length for DES Cipher is

   a) 1-440 bits   b) 56 bits   c) 128 bits   d) 128-256 bits

18 Internet Message Access Protocol is defined in

   a) RFC 2060   b) RFC 2205   c) RFC 2045   d) RFC 2210

19 The markup language used by the WAE layer is

   a) SGML   b) XHTML   c) XML   d) WML

20 A Non Guaranteed Quality of Service for LAN is

   a) H.225   b) H.245   c) G.723.1   d) H.323

PART – B (5 x 16 = 80 marks)

21. a) i. What are the essential elements of a Network Architecture?   (6)

       ii Explain the different layers in OSI Reference model.   (10)

(OR)

    b) i. Compare message switching, packet switching and circuit switching.   (8)

       ii What are advantages of optical fiber over twisted pairs and coaxial cable?   (8)

22	a)	i.	What is the purpose of CSMA? Explain 1-persistent CSMA.	(8)
		ii.	Explain the sliding window protocol using go back N concept with its algorithm.	(8)

(OR)

22	b)	i.	What is framing? Explain the different framing methods are used to provide services to the network layer?	(8)
		ii.	Explain pure-ALOHA and Slotted ALOHA.	(8)

23	a)	i.	How routing is implemented in Ad Hoc Networks? Explain AODV algorithm.	(12)
		ii.	What are the congestion preventive policies?	(4)

(OR)

23	b)		What are the elements of transport protocol? How can you set up and establish a connection to remote application process?	(16)

24	a)	i.	Explain the Poisson arrival process and service times in Queuing system.	(8)
		ii.	Explain the steady state Probabilities and the Notation of Stability in M/M/1 Queuing system.	(8)

(OR)

24	b)	i.	Explain the service time variability and delay in M/G/1 Queuing system.	(8)
		ii.	What is Priority Queuing? Explain Nonpreemptive priority Queuing.	(8)
25	a)	i.	Explain the different message formats used in electronic mail?	(8)
		ii.	Explain the three phases of JPEG compression.	(8)

(OR)

25	b)	i.	Explain the Abstract Syntax Notation 1 in detail.	(8)
		ii.	Distinguish between substitution cipher and transposition cipher.	(8)

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