Register Number.....

M.E DEGREE EXAMINATIONS: JANUARY 2009

First Semester

COMMUNICATION SYSTEMS

P07AEE10 High Performance Communication Networks

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

Answer ALL Questions:-

PART A (20 x 1 = 20 Marks)

1. Ethernets are inexpensive and provide a relatively

A. low throughput and low delay
B. high throughput and low delay
C. low throughput and high delay
C. high throughput and high delay

2. The important task of the presentation layer is

A. Data compression
B. Segmentation
C. Suppression of connection
D. Reassembly

3. The transmission rate of the token ring network is

A. 2 Mbps or 8 Mbps
B. 4 Mbps or 16 Mbps
C. 14 Mbps or 64 Mbps
D. 8 Mbps or 32 Mbps

4. BOC network is used in

A. FDDI B.DQDB C. WLAN D.SMDS

5. In integrated Digital Network, the incoming voice signal is digitized using ---------- and Multiplexed using ----------

A.PCM and TDM
B.PWM and FDM
C. PPM and TDM
D.FM and FDM

6. Control protocol block has the exclusive task of supporting

A. network management
B. user information
C. ISDN Signaling
D. user interface

7. Enables incoming calls to a specific ISDN numbers to be distributed over a group of interfaces or Terminals called ---------- .

A. call deflection
B. call forwarding
C. call transfer
D. line hunting

8. A ---------- is at any point in the signaling network capable of handling SS7 control messages.

A. signaling transfer point B. signaling link C. data link D. signaling point

9. The ---------- converts the information stream into a stream of 48- byte data cells.

A. ATM adaptation layer
B. ATM IP layer
C.ATM physical layer
D. ATM application layer

10. The parameter of the traffic are defined by an algorithm called

A. generalized traffic rate algorithm
B. generalized cell rate algorithm
C. generalized frame rate algorithm
D. generalized bit rate algorithm

11. Point to multipoint connections connect a single root node to multiple destination is called

A. root network
B. ATM switch
C. leaves
D. routing

12. The committed information rate (CIR), the committed Burst size (B_c) and measurement time (T) are related by

A. $T = B_c/CIR$
B. $T = 2 B_c . CIR$
C. $T = CIR/ B_c$
D. $T = CIR. B_c/ 2$

13. The process of discarding packets based on specified rules is called

A. marking
B. metering
C. dropping
D. shaping

14. In a Multi Protocol Label Switching, the Label size is

A. 16 bit field
B. 32 bit field
C. 64 bit field
D. 128 bit field

15. A wild card filter style is used in

A. Resource Reservation Protocol (RSVP)
B. Multi Protocol Label Switching (MPLS)
C. Real time transport protocol (RTP)
D. Internet protocol (IP)

16. The logical link control and adaptation protocol (L2CAP) to carry up to ---------- of data per packet.

A. 1024 bytes
B. 8192 bytes
C. 16384 bytes
D. 65535 bytes

17. The ability to define routes dynamically, plan resource commitments on the basis of known demand and optimize network utilization is referred to as

A. Routing technology
B. Network Engineering
C. Traffic Engineering
D. Optimizing technology

18. An antenna which radiates uniformly in all the directions in a perfect sphere is called

A. loop antenna
B. isotropic antenna
C. micro strip antenna
D. flat type antenna

19. In Host Controller Interface command packet structure, the first byte of the opcode is

A. opcode group field
B. opcode command field
C. opcode control field
D. opcode data field

20. ---------- is used to carry packets from the higher IP and WAP layer across Blue tooth's RFCOMM serial port emulation layer.

A. Wireless Transport Protocol (WTP)
B. User Datagram Protocol (UDP)
C. Internet Protocol (IP)
D. Point to Point Protocol (PPP)

PART B (5 x 16 = 80 Marks)

21. (a) Draw a neat schematic diagram of DQDB MAN with DQDB protocol and explain why there isno conflict or collision in this network.

(OR)

21. (b) (i) Describe the internetworking with Switched Multimegabit Data Services(SMDS) (8)

(ii) Explain the physical layer of Ethernet (IEEE 802.3) networks. (8)

22. (a) Describe the functional and protocol architecture of Signaling System number 7(SS7) architecture.

(OR)

22. (b) Explain the different types of ISDN services are defined by ITU-T.

23. (a) (i) Explain the headers of ATM cells across the user network interface and across a network-network interface. (8)

(ii) Describe the internetworking with ATM. (8)

(OR)

23. (b) (i) Explain the congestion in frame relay networks. (12)

(ii) Describe the frame relay congestion control techniques. (4)

24. (a) (i) Discuss the goals and characteristics of Resource Reservation Protocol (RSVP) (4)

(ii) Explain the operation of Resource Reservation Protocol (RSVP). (12)

(OR)

24. (b) Explain the Multi Protocol Label Switching (MPLS) terminology and its operation .

25. (a) (i) Explain about the WAP on the Bluetooth protocol stack. (8)

(ii) Explain the Host Controller Interface transport layer in detail. (8)

(OR)

25. (b) (i) Explain the different types of RFCOMM devices. (8)

(ii) Explain the various audio coding techniques of Bluetooth module in detail. (8)

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