S-72.1130 Telecommunication Systems   Exam22.12.2009

Select true (T), false(F) or unknown (U). Correct answer yields +1 points, wrong answer -1 points and unknown answer 0 points.

Collect and return your answers in the supplied form

1 In server-client architecture server may have dynamic IP address

2 IP6 supports data fragmentation

3 While using DHCP server arriving client needs to know DHCP server address before anything can be done for own, temporary IP discovery

4 NAT maps N internal (in a sub network) IP addresses to N outgoing ports and N outgoing IP addresses

5 802.2 Logical Link Control Layer (LLC) services are:
a)unacknowledged connection oriented service
b)acknowledged connectionless service
c)connection oriented service

6 ISDN applies channel associated signaling (CAS)

7 Both CCITT and T-carrier systems apply 64kbit/s basic rates

8 Network echo canceller (NEC) works by introducing cut-offs to signal paths of echo cancellation

9 In P2P architecture peers are mutually connected

10 FTP applies separate ports for control and data connections

11 In OFDM 'orthogonality' refers to orthogonality of transmitted OFDM symbols, not subcarriers as such

12 OFDM transmits digital, high-rate multilevel signal voltages in PSTN local loop cables

13 Token bus 802.4 applies contention based MAC scheme

14 802.11 WLANs and 802.3 Ethernets apply the same link control protocol specified on standard 802.2 standard

15 Domain name system (DNS) applies UDP

16 Centralized DNS is applied for the reason that it really scales!

17 TCP supports multi-streaming

18 SCTP is sensitive to SYN attacks

19 UDP check sum can applied to correct received packet without retransmission

20 IP4 datagram contains time to live — field that is created to control transmission time. Larger the field value the higher transmission rate can be achieved

21 In NAT transversal problem client residing outside of subnetwork has a problem to identify hosts residing behind NAT

22 ARP takes care of mapping IP and MAC addresses

23 In server-client architecture servers might communicate directly with each other(internet lecture slide p.17 Client-server architecture: distributed approach!)

24 In UDP each segment is handled independently of others

25 ARP applies broadcasting queries to find MAC addresses

26 ADSL supports inherently ATM

27 In ADSL, tone ordering is used to order dial tones to facilitate flexible addressing

28 Distribution system in 802.11 basic service set connecting access points and internet gateway can be for instance wired Ethernet

29 802.11 supports roaming with 2G and 3G networks

30 Per trunk signaling in local loop is sensitive to interference & cross-talk sensitive

31 Network Layer provides specifications for managing the communication between two applications across an OSI network by facilitating the dialogue and inserting checkpoints in a large sequence of data bits. (F)

32 The three physical layer options for 802.11 are Direct Sequence Spread Spectrum (DSSS), Frequency Hopping Spread Spectrum (FHSS) and Carrier Sense Multiple Access (CSMA)

33 Guard interval provides robustness to rms delay spreads of up to several hundred nanoseconds, depending on the coding rate and modulation used