

FINAL EXAMINATION
SOUTHERN METHODIST UNIVERSITY — EE 8301
NATIONAL TECHNOLOGICAL UNIVERSITY — ST 750-N
Campus Class Date: July 28, 1999

CERTIFICATION OF TESTING ENVIRONMENT (To be signed after taking test):

ALL STUDENTS:

I understand that this test is intended to be taken without my prior knowledge as to content and without collaboration with other persons. On my honor, I testify that I have taken it within that context and that I will not discuss or share its contents with anyone other than the instructor and other students who have already taken it.

Signed _____
(Must be signed by student to be counted)

FOR OFF-CAMPUS SITES ONLY:

I distributed and collected these test materials on a 60-minute interval on

_____ **(date).**

Signed _____
(Must be signed by site coordinator to be counted)

Name _____

Location _____

EE 8301 and ST 750-N -- FINAL EXAMINATION

Closed Book -- Closed Notes -- 60 minutes**

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No grade information can be given over by phone. If you want your grade mailed directly from the instructor to you, submit a stamped self-addressed envelope, a signed request for grade, and indicate on the note which course number you are inquiring about. Sorry, course grades can't be e-mailed.

*** Each true/false question is worth 2%. READ EACH STATEMENT CAREFULLY. If the statement is all true, circle "T"; if it is all or partly false, circle "F".*

- T F 1. The "Fast Select" facility of X.25 is similar to the datagram capability of IP.
- T F 2. X.25 is a symmetrical protocol.
- T F 3. The sum of all the bit rates of all access lines into a FRAD may not exceed the trunk speed.
- T F 4. If a frame relay user exceeds the CIR, frames will always be lost.
- T F 5. In frame relay, FECN=1 tells the sender that a frame has been discarded.
- T F 6. Network latency and network transit delay mean the same thing.
- T F 7. SNMP was developed to help manage the Internet.
- T F 8. Category 6 wiring is said to be able to handle up to 10 Gb/s for distances of 100 meters.
- T F 9. Category 7 wiring is really fiber.
- T F 10. An ISDN bearer channel, once established, is normally a real circuit (not virtual).
- T F 11. IPv4 has a fixed address length of 32 bits, but IPv6 uses a length field to determine the address length.
- T F 12. "Unreliable" is a term used to describe services resulting from connectionless protocols.
- T F 13. The LLC frame is "pure" HDLC except that the control field is different.
- T F 14. Ethernet (IEEE 802.3) is the most popular LAN topology in the world.
- T F 15. "Spoofing" stands for Simultaneous Processing Of On-line Functions.
- T F 16. FTP is part of the TPC/IP Protocol Suite.

- T F 17. TCP/IP protocols use the International bit-numbering standard for designating bits.
- T F 18. "Transmission Delay" is related to the length of the medium.
- T F 19. IP can work without TCP, but TCP cannot work without IP.
- T F 20. UDP is an international standard that is sometimes used with IP.
- T F 21. Almost all Frame Relay Service today is an unreliable PVC service.
- T F 22. In IBM systems, the LSB is transmitted first.
- T F 23. SMDS is a reliable datagram service.
- T F 24. Switched Access to Frame Relay is the same thing as SVC Frame Relay.
- T F 25. According to the instructor, SNMP is much more widely used in the U.S. than CMIS/CMIP, because of the popularity of TCP/IP.
- T F 26. Public carriers do not offer Frame Relay SVC services because standards do not exist.
- T F 27. Pulses in the ISDN basic rate T reference point always alternate polarity.
- T F 28. Basic rate ISDN operates isochronously at the "T" reference point; i.e., both transmit and receive timing are based on the same clock source.
- T F 29. A congested frame relay node can discard frames whether or not the DE bit is set to 1, and whether or not the frame contains errors.
- T F 30. When a higher sublayer PDU is used as the SDU of a lower sublayer, it is called tunneling.
- T F 31. A virtual circuit is a networking arrangement whereby the PCI directs the destination of the SDU.
- T F 32. Every X.25 virtual circuit has two access lines and two logical channels.
- T F 33. The ISO is part of ANSI.
- T F 34. According to the instructor, radio systems will play a much greater role in the transmission of data in the future than in the past.
- T F 35. High-Layer Functions are in Layers 3-7.

- T F 36. If Layer 7 protocols are connection-oriented, then Layer 4 must also be connection-oriented; if Layer 7 is connectionless, then Layer 4 must be connectionless.
- T F 37. The International bit-numbering standard is for LSB to be Bit #1, and other bits to be numbered in increasing significance.
- T F 38. Serial interfaces tend to work better at high bit rates if the voltages are unbalanced.
- T F 39. An EIA-232 interface may be used for start-stop, synchronous, and isochronous timing with appropriate modems and circuits.
- T F 40. All of the classical problems and limitations with the EIA-232 electrical specification have been corrected in the EIA-232-D version.
- T F 41. The PCI for SONET is a header that is transmitted at the front of the SONET frame.
- T F 42. There is no provision in HDLC for a window size greater than 127.
- T F 43. The response to an illegal command containing a transmission error is FRMR.
- T F 44. The feedback tap positions for computing a CRC are determined by the coefficients of a "Message Polynomial."
- T F 45. Spoofing is used in various data communications systems to reduce network cost, to overcome window delay, and/or to overcome buffer delays.
- T F 46. The only way to provide for a variable address field length in a protocol is to use a length indicator ahead of the address field.
- T F 47. A virtual circuit system allows one access line to be used to communicate with many destinations at approximately the same time.
- T F 48. In LAPB, the "address" of the TE is 0000001E, where E = EA bit, LSB on right.
- T F 49. The P(S) counter in X.25 PLP (Packet Layer Part) is counting all packets in a given logical channel.
- T F 50. During normal operation, the N(S) value in LAPB advances faster than the P(S) in X.25 PLP (Packet Layer Part).