SAMPLE FINAL EXAMINATION QUESTIONS AND ANSWERS

COMPUTER NETWORKS : 03-60-367

UNIVERSITY OF WINDSOR

SCHOOL OF COMPUTER SCIENCE

2 Hours

This examination document contains all questions for the examination. Each student must surrender **only** their Scantron answer sheets. Each student may take this examination question paper for future reference. Although you may write on this document, it will not be graded if it is submitted. There is no need to place your name on this document.

PLEASE READ CAREFULLY BEFORE YOU START

1. This is a CLOSED book examination; no notes, textbooks, calculators or computer aids are allowed.
2. You must sign your name before leaving the exam room (sign-out sheet) and after submitting your exam answer sheet (Scantron computer sheet).
3. PLACE YOUR NAME AND STUDENT ID NUMBER on the Scantron sheets provided – you must use a pencil (NO PENs). Your examination is Course/Section: 03-60-367-01
4. PLACE ANSWERS on the Scantron sheets provided – you must use a pencil (NO PENs).
5. You are not allowed to give or receive unauthorized help with your test. Any misconduct, as outlined by the Senate bylaw 31 article I, will be reported accordingly.
6. **You have 2 hours to complete this test, starting from the time stated by the instructor.**
7. **When the instructor indicates that time has elapsed all students must stop writing answers and surrender their Scantron answer sheets immediately to the proctors.**
8. The total (maximum possible) mark on this exam is **xxx.**

Good Luck!

All questions are either Multiple Choice or True-False. For each Multiple Choice question, you are to choose only one response which **best answers** the question. For True-False questions you may choose only one option (True or False). There may be up to five (5) response options for some questions. Place all answers on the Scantron sheet provided. The examination will be marked using the campus computer.

If an error is made you must carefully and completely erase your mistake and then indicate your choice of answer. Completely and carefully fill the circle that indicates your answer to each question. Make sure you have selected the correct question number on the Scantron sheet corresponding to the question on the examination question paper.

WARNING !

Read and think carefully about each question before answering.

Questions have been scrambled by topic. Keep your attention on your own test paper and answer sheet.

1. Network layer protocols must be defined in every router.
   A) True
   B) False

2. Both UDP and TCP require that the applications recognize their own data formats.
   A) True
   B) False

3. Most local area networks (LANs) use electrostatic network hardware.
   A) True
   B) False

4. A subnet may be defined as any interconnected set of computers and routers (or switches) that can operate in isolation from other subnets, or in cooperation with other subnets.
   A) True
   B) False

5. TCP abstracts data communication to appear as an apparent stream of flowing data.
   A) True
   B) False

6. Assume that three routers, U, V and W, have link costs: c(U,V) = 3, c(U,W) = 7 and c(V,W) = 2. Using the Bellman-Ford algorithm, the common routing table for all routers is:

	U	V	W
U	1	3	5
V	3	1	2
W	5	2	1.

   A) True
   B) False

7. Network Address Translation is used because it expands the available device address space through use of port numbers and thereby satisfies the end-end argument at the network layer.
   A) True
   B) False

8. The purpose of a network interface card is to implement the link and physical layer interface.
A) True
B) False

9. Internet Control Message Protocol (ICMP) is used by hosts and routers to communicate network-level information.
A) True
B) False

10. Standard bus type Ethernet links are managed so that collisions are assumed to happen.
A) True
B) False

11. Security services include access control, data confidentiality and data integrity, but do not include authentication.
A) True
B) False

12. All datagrams contain 2 ports.
A) True
B) False

13. Before the application of the public-key cryptosystem each participant must generate a pair of keys.
A) True
B) False

14. Frequency Division Multiplexing (FDM) divides time into time frames and further divides each time frame into time slots.
A) True
B) False

15. ICMP (Internet Control Message Protocol) messages are carried in IP datagrams.
A) True
B) False

16. A large-scale data center employs a hierarchy of routers and switches. At the top of the hierarchy are the Top of Rack (TOR) switches.
A) True
B) False

17. Ethernet is considered to be both connectionless and unreliable.
A) True
B) False

18. In Ethernet networks, the Preamble pattern is used to synchronize receiver and sender clock rates.
A) True
B) False

19. With the use of symmetric encryption, the principal security problem is maintaining the secrecy of the key.
A) True
B) False

20. The main goal of Bellman-Ford's algorithm is to ensure that all network nodes have the same information to provide shortest path service for message routing.
A) True
B) False

21. The field of network and Internet security consists of measures to deter, prevent, detect and correct security violations that involve the transmission of information.
A) True
B) False

22. Amplitude modulation refers to rapid variations of signal strength to indicate bits or other tokens.
A) True
B) False

23. Datagram networks require call setup at the network layer.
A) True
B) False

24. With half duplex at the link layer, nodes at both ends of the link can transmit at the same time.
A) True
B) False

25. Information access threats intercept or modify data on behalf of users who should not have access to that data.
A) True
B) False

26. Symmetric encryption remains by far the most widely used of the two types of encryption.
A) True
B) False

27. Given the CRC coding bits 101110011 and generator 1001, is an error detected?
A) Yes, there is an error.
B) No, there is no error.

28. At the network layer, a spanning tree is used to ensure that no redundant packets are received by any node.
A) True
B) False

29. Internet transport-layer protocols provide delay and bandwidth guarantees.
A) True
B) False

30. Network services and protocols provide logical communication between hosts.
A) True
B) False

31. SMTP uses handshaking at the application layer whereas HTTP does not.
A) True
B) False

32. One role of a NIC is to accept a datagram from the next higher layer and encapsulate the datagram into a frame, along with frame header and trailer bit fields, such as rdt and CRC.
A) True
B) False

33. Both MAC addresses and IP addresses are usually written in dotted-decimal notation.
A) True
B) False

34. Transport services and protocols provide logical communication between hosts.
A) True
B) False

35. IPSec provides _____.
A) neither encryption of IP datagram payloads, nor data integrity
B) no encryption of IP datagram payloads, but does provide data integrity
C) encryption of IP datagram payloads, but not data integrity
D) encryption of IP datagram payloads, and data integrity
E) All of these responses are correct.

36. Which of the following is correct about OSPF?
A) It is an inter-AS routing approach.
B) It is used in lower-tier ISPs.
C) It uses flooding of link-state information.
D) It runs Dijkstra's algorithm.
E) Both C and D are correct responses.

37. Among the unethical or illegal acts that "bad guys" can do to messages travelling on a computer network is (are) included _____ .
A) eavesdropping
B) impersonation
C) hijacking, denial of service
D) actively inserting messages into connections
E) All of these responses are correct.

38. IPv6 has _____-bit addresses..
A) 48
B) 64
C) 128
D) Variable length

39. What upper layer protocol does the two-byte Frame type field in the Ethernet header correspond to?
A) IP
B) TCP/UDP
C) HTTP
D) ARP
E) CSMA

40. In datagram networks _____ .
A) routers maintain state about end-to-end connections
B) packets are forwarded using destination host address and virtual circuit number
C) packets between same source-destination pair may take different paths
D) None of these responses is correct.

41. In order to provide multiple access to networks it is necessary to _____ .
A) use a reserved channel to obtain communication information about channel sharing
B) specify a distributed algorithm that determines how nodes share channels
C) use only devices for which collisions do not occur
D) Both A and B responses are correct.

42. A MAC address has length _____ bits.
A) 20
B) 48
C) 6
D) 128
E) None of the responses above are correct.

43. When you login to some page and your Wireshark is running, an extra header is added into client's HTTP GET message. What is that header?
A) Authorization: Basic
B) Accept-Encoding
C) Accept-Language
D) None of the responses above are correct.

44. In which of the following protocol headers will you find "*opcode" header*?
A) HTTP
B) TCP
C) ARP
D) ICMP
E) All of these responses are correct.

45. Routing algorithms may be classified based on _____ .
A) availability of global information
B) availability of local information
C) rate of change of network paths
D) All of the responses above are correct.

46. Which protocol is not related to the network layer?
A) ARP
B) BGP
C) RIP
D) ICMP
E) Both A and C are correct responses.

47. Which of the following responses is not a desirable property of secure communication?
A) Confidentiality
B) Operational security
C) End-point authorization
D) Message integrity
E) None of these responses are correct.

48. Connectionless demultiplexing may be performed using _____ .
A) TCP
B) UDP
C) ICMP
D) HTTP
E) All of the above are correct responses.

49. In pipelining protocols, the Go-back-N approach requires _____ .
A) Sender can have up to N **`unacked`** packets in pipeline
B) Receiver **`acks`** individual packets
C) If sender timer expires, retransmit all N packets
D) Sender has timer for each **`unacked`** packet

50. Assume that a University of Windsor student has booted their laptop computer while waiting for a flight in Vancouver, but have not yet connected wirelessly to the free wireless server in the airport. Their intention is to connect to the Computer Science website in Windsor. How many network transactions would be required to obtain a network connection and eventually establish the return of the Computer Science webpage at URL http://cs.uwindsor.ca/ ?
A) Fewer than 5
B) More than 5, but less than 15
C) More than 15, but less than 50
D) More than 50

51. TCP congestion control uses a congestion window to implement _____.
A) Timeout acknowledgment
B) Congestion avoidance
C) Message traffic scheduling
D) None of the above responses is correct

52. ICMP does not use ports because _____ .
A) ICMP packets are only transmitted between routers and switches
B) ICMP packets are only transmitted in IP datagrams
C) ICMP is a network layer protocol and does not use ports
D) ICMP is an application layer protocol and does not use ports
E) None of the responses above are correct.

53. Consider sending a 6000 byte datagram into a link that has a maximum transfer size (MTU) of 1000 bytes. How many fragments are generated?
A) 8
B) 7
C) 6
D) 5

54. If a router malfunctions, the link state algorithm is affected because _____ .
A) a node can advertise incorrect link cost
B) each node recomputes its table and forwards it to other nodes
C) errors are contained locally within the network
D) a node can advertise incorrect path cost

55. In Ethernet networks, the Preamble consists of 7 bytes with pattern 10101010 followed by one byte with pattern _____ .
A) 11101010
B) 10101011
C) 01010101
D) None of the above responses are correct.

56. Which of the following options hides the details of a home network from the rest of the Internet?
A) ARP
B) DHCP
C) ICMP
D) NAT

57. Message encapsulation refers to _____ .
A) embedding payloads and protocol headers within logically layered packages
B) allowing for message content verification
C) reliance upon IP for transmitting messages
D) designating message contents with descriptive data

58. If Bob and Alice are two peers and each is located behind a Network Address Translation (NAT) server across a wide-area network (WAN) then, in the absence of application-specific NAT configuration, _____ .
A) they can establish a reliable UDP connection
B) they cannot establish a SMTP connection
C) they can establish a TCP connection
D) they cannot establish a HTTP connection
E) None of these responses are correct.

59. As used in computer science and engineering networking, the term MAC refers to _____ .
A) Message authentication code
B) Medium Access Control
C) the first three characters of MAChine
D) Both A and B are correct responses.

60. Link layer services provide _____ .
A) Framing and flow control
B) Reliable delivery between adjacent nodes
C) Error detection and correction
D) All of the responses above are correct.

61. If a router malfunctions, using Distance-Vector protocols, _____ .
A) a node can advertise incorrect path cost
B) each node computes only its own table
C) corrective actions occur immediately to isolate the error
D) Both A and B are correct responses.

62. IP datagrams may be fragmented into several smaller IP datagrams _____ .
A) that are reassembled at the next router link
B) in order to adapt to the largest transport layer datagram
C) that are reassembled only at the final destination
D) Both B and C are correct responses.

63. A _____ attack involves trying every possible key until an intelligible translation of the ciphertext is obtained.
A) brute-force
B) Caesar attack
C) ciphertext only
D) chosen plaintext

64. Router buffer sizes should be selected based on _____ .
A) message round-trip time
B) link capacity
C) tolerance for data loss due to overflow
D) All of the responses above are correct.

65. Carrier signals are used to _____ .
A) detect whether the network is currently in use by another host
B) provide a stable reference above noise levels
C) advise hosts that the network is active
D) All of the responses above are correct.

66. Forwarding refers to the manner by which datagrams are _____ .
A) routed from source to destination ports of end hosts
B) routed from input to output ports of individual routers
C) sent from an intended receiver to a third-party destination
D) routed from source to destination between adjacent routers

67. A network's speed is expressed in terms of _____ .
A) Routing protocol
B) Round trip time
C) Bit rate and latency
D) I/O buffer response

68. Modern network security provides _____ .
A) Authorization
B) Message integrity
C) Secure access and general availability
D) All of these responses are correct.

69. Random access protocols in shared bus networks use _____ to provide "*listen before speaking*" and "*stop talking if someone else already is talking*" rules.
A) CSMA
B) SMDP
C) ALOHA
D) Slotted ALOHA
E) All of these responses are correct.

70. Which sublayer of the data link layer performs data link functions that depend upon the type of medium?.
A) logical link control
B) media access control
C) network interface control
D) None of these responses are correct.

71. When 2 or more bits in a data unit have been changed during the transmission, the error is called a(n) _____ .
A) random error
B) burst error
C) inverted error
D) logical error
E) None of the responses above is correct.

72. Which of the following router topologies has the highest reliability?
A) Mesh
B) Star
C) Ring
D) Bus
E) All of these responses are correct.

73. A host, mounted on a rack, in a data center is called a _____ .
A) Rack-server
B) Top of Rack (TOR) switch
C) Blade
D) Rack-mount
E) All of the responses above are correct.

74. What is the length of the type field frame in Ethernet?
A) 2 bytes
B) 4 bytes
C) 42 bits
D) 1 byte

75. The property that a network should operate efficiently when deployed on a small-scale as well as on a large-scale is called _____ .
A) Migration
B) Determinism
C) Scalability
D) Auto-configurability

76. Consider a datagram network using 8-bit host addresses. Suppose a router uses longest prefix matching to determine whether message traffic is to be routed through one of only four forwarding ports. The range of addresses to be routed through Port 2 is _____ .
A) 00000000 through 00111111
B) 00000000 through 11111100
C) 01000000 through 10000000
D) 10000000 through 10111111

77. Which one of the following does not use channel partitioning?
A) TDM
B) FDM
C) CSMA
D) None of the responses above is correct.

78. Assume that four (4) datagrams are received in sequence and are then checked for parity errors. The first datagram bit string contains the 7-bit pattern `1011010`, followed by the second datagram pattern `0010111`, third datagram pattern `1111110`, and fourth datagram pattern `0110011`. Each of the bit patterns consists of a leading (leftmost) 6-bit pattern that is the data payload followed by the rightmost parity bit (parity is defined as 0/1 if the number of 1-bits in the data payload is even/odd). The fourth datagram pattern bits are the parity values of the first three datagram bits in the corresponding positions (taken as a column). The error checking scheme is the two-dimensional parity bit check. Which of the following statements is most correct?
A) There is certainly an error in the first datagram
B) There is certainly an error in the second datagram
C) There is certainly an error in the third datagram
D) There is no apparent error, but it is impossible to be fully certain about the data correctness in this case

79. RIP, OSPF and BGP are examples of _____ .
A) application layer routing protocols
B) transport layer routing protocols
C) network layer routing protocols
D) Both B and C responses are correct.

80. The protocol that requires a master node to grant access to each node in a collision domain, in a round-robin fashion, is called a _____ .
A) token-passing protocol
B) polling protocol
C) random access protocol
D) None of the responses above is correct.

81. Demultiplexing involves _____ .
A) gathering data from multiple sockets
B) encapsulating data with a header
C) delivering received segments to correct sockets
D) Both A and B are correct responses.

82. RIP advertisements typically announce the number of hops to various destinations. BGP updates, on the other hand, announce the _____ to the various destinations.
A) link costs
B) adjacent link nodes
C) "I'm alive" message
D) previous link path table

83. Which one of the following is a data link layer protocol?
A) network news transfer protocol
B) peer to peer protocol
C) high level data link control protocol
D) None of these responses are correct.

84. _____ techniques map plaintext elements (characters, bits) into ciphertext elements.
A) Transposition
B) Substitution
C) Traditional
D) Symmetric
E) All of these responses are correct.

85. Which protocol is used for error reporting in network layer?
A) TCP
B) ARP
C) OSPF
D) ICMP

86. Within LANs, link layer addressing is accomplished by using _____ .
A) IP addresses only
B) MAC addresses only
C) both MAC and IP addresses
D) None of these responses are correct.

87. The data link layer takes the packets from the _____ layer and encapsulates them into frames for transmission.
A) application
B) physical
C) transport
D) network

88. Which one of the following tasks is not done by data link layer?.
A) framing
B) error control
C) flow control
D) channel coding
E) None of these responses are correct.

89. SSL version 3 is out of date and has been replaced by _____ .
A) SSL version 3.1
B) SSL version 4
C) Socket Layer Security (SLS)
D) Transport Layer Security (TLS)

90. What is the largest payload an IPv4 UDP packet can hold?
A) 65517 bytes
B) 65535 bytes
C) 65527 bytes
D) 65507 bytes

91. Routers provide feedback to end systems to assist _____ .
A) network-assisted congestion control
B) end-end congestion control
C) network-assisted flow control
D) end-end flow control
E) Both A and B responses are correct.

92. Which layer has the responsibility of transferring datagrams from one node to adjacent node(s) over a link?
A) Application layer
B) Transport layer
C) Link layer
D) Network layer

93. Which layer has the responsibility of moving individual bits from one node to adjacent node(s) over a link?
A) Physical layer
B) Transport layer
C) Link layer
D) Network layer

94. The routing methods that compute the least-cost path between source and destination using complete, global knowledge about the network are called _____ .
A) link-state
B) distance-vector
C) OSPF
D) All of these responses are correct.

95. The motivation(s) for utilizing Network Address Translation include(s) _____ .
A) making available a range of unique IP addresses for all devices in every subnet
B) ability to change addresses of devices in local network without notifying outside world
C) ability to change ISP without changing addresses of devices in global network
D) establishing direct addressability to local devices inside subnet
E) All of these responses are correct.

96. In order to deal with the situation where too many sources send too much data too fast for a network to handle, it is necessary to use a technique called _____ .
A) Flow control
B) Congestion control
C) Routing control
D) Dynamic packet management

97. BGP messages are exchanged using _____ .
A) ICMP
B) TCP
C) UDP
D) Proprietary Cisco protocols

98. UDP and TCP are examples of _____ layer protocols.
A) Application
B) Link
C) Transport
D) Network
E) Physical

99. The IPv6 datagram header has length _____ bytes.
A) 20
B) 40
C) 32
D) 128

100. Multiple TCP streams can be distinguished on a given machine using _____ .
A) Ports
B) IP addresses
C) network interface cards
D) routing tables
E) All of these responses are correct.

101. When the link cost increases suddenly between two routers in a network, poisoned reverse is used to _____ .
A) guarantee unique routing solutions in the final routing tables
B) replace all update link costs initially to infinity for all routes through the affected routers
C) accelerate the convergence to a stable routing table
D) identify an error and re-route datagrams along different paths
E) Both B and C responses are correct.

102. In order to establish a virtual connection (also called a virtual circuit) that permits datagrams to flow between communicating end hosts, it is necessary to _____ .
A) involve both the end hosts and all intervening routers
B) initiate the connection using specialized datagrams that carry historical information about the end-end route
C) complete the connection using receiver and sender acknowledgements
D) All of these responses above are correct.

103. Consider a packet of length 1024 bytes. Assuming the packet must travel over a link of distance 2500 kilometers with propagation speed 2.5×10^8 m/s and transmission rate 2 Mbps, what is the propagation delay?
A) 1 millisec
B) 10 millisec
C) 20 millisec
D) 10 microsec

104. The _____ attack is the easiest to defend against because the opponent has the least amount of information to work with.
A) known ciphertext
B) chosen ciphertext
C) known plaintext
D) chosen plaintext

105. An encryption scheme is said to be computationally secure if _____ .
A) the cost of breaking the cipher exceeds the value of the encrypted information
B) the time required to break the cipher exceeds the useful lifetime of the information
C) the amount of time required to break the cipher is greater than the fastest CPUs
D) Both A and B responses are correct.

106. Consider a packet of length 1024 bytes. Assuming the packet must travel over a link of distance 2500 kilometers with propagation speed 2.5 x 10^8 m/s and transmission rate 2 Mbps, what is the transmission delay?
A) approximately 8 millisec
B) approximately 80 millisec
C) approximately 200 millisec
D) approximately 10 microsec

107. In "ring" networks, using the "taking turns" MAC protocol, a _____ is passed from one node to the next node sequentially.
A) link allocation schedule
B) control token
C) network synchronization signal
D) "network ready" polling signal

108. An automatic repeat request error management mechanism is provided by the _____ .
A) logical link control sublayer
B) media access control sublayer
C) network interface control sublayer
D) None of the responses above is correct.

109. Virtual local area networks (VLANs) address the drawback of _____ in institutional LANs.
A) lack of traffic
B) MAC address management
C) inefficient use of switches
D) Both A and C are correct responses.

110. Before the GET command can be sent to an HTTP server, TCP must first set up a connection using which protocol?
A) Sliding Window Protocol
B) Point-to-Point Protocol
C) Three-Way Handshake
D) One-Bit Sliding Window Protocol

111. Which of the following is a proper layer of the OSI stack?
A) Link
B) Network
C) Presentation
D) Session
E) All of these responses are correct.

112. What is the protocol number of UDP (in decimal)?
A) 11
B) 17
C) 21
D) 27

113. Which of the following is not an advantage of UDP?
A) Transmission reliability
B) Faster packet transmission rate
C) Less overhead
D) Can be used in multicast applications

114. In pipelining protocols, the selective repeat approach requires _____ .
A) Receiver only sends cumulative **`acks`**
B) Sender maintains timer for cumulative **`unacked`** packets
C) Receiver **`acks`** individual packets
D) Both A and B responses are correct
E) Both B and C responses are correct

115. The main difference between a switch and a router is _____ .
A) switches do not store and forward packets
B) switches work at layer 3
C) switches forward packets using IP addresses
D) switches forward packets using MAC addresses

116. ICMP is an example of a _____ layer protocol.
A) Application
B) Link
C) Transport
D) Network
E) Physical

117. Which one of the following is the multiple access protocol for channel access control?
A) CSMA/CD
B) CSMA/CA
C) CSMA/CB
D) Both A and B responses above are correct.
E) All of A, B and C responses above are correct.

118. The first item in an IP datagram is the _____ .
A) header length (in bytes)
B) total datagram length (in bytes)
C) protocol version number
D) type of service

119. The header of a frame generally contains _____.
A) synchronization bytes
B) addresses
C) identifier
D) preamble bytes
E) The responses A, B and C above are correct.

120. The reasons for handling routing differently in Inter-AS and Intra-AS routing are based on _____ .
A) differences in router capabilities
B) distance vector versus link state information
C) policy, scale and performance
D) imposed standards for packaging messages

121. Which protocol is used in order to configure IP addresses automatically?
A) ARP
B) DHCP
C) ICMP
D) RARP

122. If a router malfunctions, using Link-State protocols _____ .
A) a node can advertise incorrect link cost
B) each node computes only its own table
C) each node's table is used by others so error propagates through network
D) Both A and B are correct responses.

123. The MAC address is _____ .
A) Burned into the NIC ROM
B) Set locally on the host using software
C) Assured to be unique by standards bodies control over issuance
D) All of these responses are correct.

124. A datagram network provides network-layer _____ service.
A) connectionless
B) connection
C) core implementation dependent
D) None of the responses above is correct.

125. Consider two 16-bit data fields within a message: `1110011001100110` and `1101010101010101`. The 16-bit checksum of these two fields is _____ .
A) `1101110111011011`
B) `0100010001000011`
C) `1011101110111011`
D) None of the responses above is correct.

Use the following Table for Questions **126, 127 and 128**. The table contains the link costs (in arbitrary units) between routers S, T, U, V, W, X, Y and Z. A dash (hyphen) entry indicates that there is no direct connection between these pairs of routers.

	S	T	U	V	W	X	Y	Z
S	0	4	4	-	-	-	-	-
T	4	0	2	4	-	-	7	6
U	4	2	0	3	3	-	-	-
V	-	4	3	0	4	3	1	-
W	-	-	3	4	0	6	-	-
X	-	-	-	3	6	0	6	18
Y	-	7	-	1	-	6	0	12
Z	-	6	-	-	-	18	12	0

126. Based on the pairwise link costs in the Table above, and using Dijkstra's algorithm, determine the shortest path route from S to T.
A) 1
B) 4
C) 6
D) 7
E) None of these responses are correct.

127. Based on the pairwise link costs in the Table above, and using Dijkstra's algorithm, determine the shortest path route from X to S.
A) 16
B) 10
C) 8
D) 11
E) None of these responses are correct.

128. Based on the pairwise link costs in the Table above, and using Dijkstra's algorithm, determine the shortest path route cost from X to Z.
A) 10
B) 12
C) 13
D) 16
E) None of these responses are correct.

END OF EXAMINATION