

2. Describe the process of data encapsulation as data is processed from creation until it exits a physical interface to a network. Use the TCP/IP or OSI model as an example. Enhance your answer with graphs

Data encapsulation represents the process of a layer adding a header (and possibly a trailer) to the data as it is processed by progressively lower layers in the protocol specification. In the context of OSI, each layer could add a header so that— other than the true application data—there would be six other headers (Layers 2 to 7) and a trailer for Layer 2, with this L2PDU being encoded by the physical layer onto the network media.



Part 2: MCQ:

1	A _____ is basically all of the components, hardware and software, involved in connecting computers across small and large distances. A. LAN B. WAN C. Network D. SAN	C
2	A _____ topology uses a single connection to connect all devices together. A. Bus B. Star C. Point-to-point D. Ring	A
3	Ethernet _____ has/have both a physical and logical bus topology. A. 10BaseT B. 10Base2 and 10Base5 C. 10BaseT and 10Base2 D. 10BaseT, 10Base2, and 10Base5	B
4	10BaseT logical topology is A. Bus B. Ring C. Tree D. Mesh	A
5	A _____ is used to connect networking devices that are in a very close geographic area, such as a floor of a building, a building itself, or a campus environment. A. WAN B. LAN C. MAN D. LAN and MAN	B
6	A _____ uses Gigabit Ethernet as a media type A. WAN B. LAN C. MAN D. LAN and MAN	B
7	A _____ connects two or more LANs in the same geographic area. A. LAN B. WAN C. MAN D. SAN	C
8	Put the following in the correct order, from high to low: session (a), presentation (b), physical (c), data link (d), network (e), application (f), transport (g). A. c, d, e, g, a, b, f B. f, a, b, g, d, e, c C. f, b, g, a, e, d, c D. f, b, a, g, e, d, c	D



9	Which of the following standards or protocols not used by the session layer? A. JPEG B. NFS C. TCP D. Ethernet	A, C, D
10	The _____ layer provides for hardware addressing. A. Transport B. Network C. Data link D. Physical	C
11	CSMA/CD stands for _____. A. Collision Sense Multiple Access/Carrier Detection B. Carrier Sense Multiple Access/Collision Detection C. Collision Sense Media Access/Carrier Detection D. Carrier Sense Media Access/Collision Detection	B
12	If a router has a packet it needs to route, and it can't find the destination network number in the routing table, the router _____ the packet. A. Drops B. Floods	A
13	If a device has a packet it needs to route, and it can't find the destination network number, the device _____ the packet. A. Drops B. Floods	A
14	If a device has a frame it needs to route, and it can't find the destination network number, the device _____ the frame. A. Drops B. Floods	B
15	_____ are used to provide a reliable connection. A. Ready/not ready signals B. Sequence numbers and acknowledgments C. Windows D. Ready/not ready signals and windowing	B