1. How was Ethernet used when it was first developed?

=> It was first launched in 1973 for laser printing driving applications. When the developers of ethernet developed it, it ran on big thick coax. They connected their PC's to that coax. They used to call that coax as ether. It was used by them to exchange data packets between personal computers through electromagnetic waves. In 1979 some companies like intel corporation decided to use ethernet as standard for inter-connection of products.

2. How has Ethernet stayed the same over the past 25 years? What changes are being made to

make it more useful/applicable to today's data transmission methods?

=>Although ethernet has changed a lot from the day it was developed till today. When it was developed it used to run at 2.49 Mbps, but now its running at 100 Gbps but the thing which remained same from past 25 years is that it is still using copper cabling and wireless methods to transmit dat. To make it more useful/applicable to today's data transmission method, as I already mentioned that its speed has changed, so the speed and distance of transmission have been developed.

3. How have Ethernet physical media and intermediary devices changed?

=>Ethernet's physical media and intermediary devices have changed a lot from past years. The speed and distance of data communications have increased drastically. It began from 2.49 Mbps and then went 10 Mbps, then 100Mbps, then 1 Gbps, then 10 Gbps and now it is running on 100 Gbps. If I talk about the intermediary devices, they are now designed in such a way so that different types of cabling endpoints could be used to support the increment in the speed and distance. When it was developed, coaxial wires were used, then it changed to twisted pair, then fibers and today it is wireless.

4. How have Ethernet physical media and intermediary devices stayed the same?

=> as I already mentioned in the previous question that ethernet has changed a lot, but some of its aspects are same, like most of ethernet transmissions are controlled by switches. Whether these transmissions are layer 2 transmissions or layer 3 transmissions. Moreover, the framing of ethernet is also same, expect some of the minor changes made to the introductory sections of frames, which illustrates that what kind of frame is being transmitted.

5. How do you think the Ethernet will change in the future? What factors could influence these

Changes?

=> Ethernet has already given the facilities of higher bandwidth, cheap in cost and standard based connectivity for many kinds of trades. Device connections, speed and distances will change, expected up to 400Gbps and 1 Tbps. It will modify the way networks access other networks. Ethernet in future will provide more simplified automated services of data transmission and will provide greater possibility of connectivity as commodity. But according to me the framing of transmissions done between its layers will probably stay same.

12. You are now viewing the Layer 2 frame header for the message.

a. What is the Source MAC Address: _18:4f:32:cd:a6:ed_____

b. What is the Destination MAC Address: ___98:da:c4:b0:86:9c_____

c. What is the numerical value of the Type Field: _0*0800_____

13. Using your vast knowledge of standards organizations from Lab 2, find the list of

EtherType values (hint: the IANA maintains the list). Enter the website here:

https://www.iana.org/assignments/ieee-802-numbers/ieee-802-numbers.xhtml#ieee-802-numbers-1_____

14. Using the list, what EtherType would we find if this message were an Internet Protocol

Version 6 message (numerical value): _____0*86DD_____