Institute of Business Administration
MIS & CS Department
CSE-556 Internetworking
Fall Semester 2002
First Hourly Test
September 4, 2002

Time Allowed: One Hour **Total Marks: 100**

Instructions

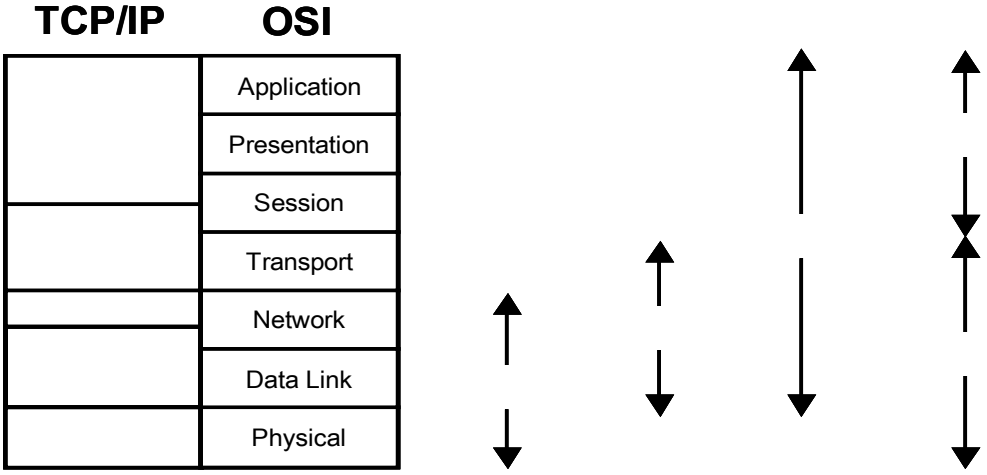
1. Attempt all questions. Maximum/Total Marks are 100. All questions carry 10 points except Question 8 which carries 30 points.
2. Time allowed is 1 hour.
3. Do NOT write on the Question Paper. Provide your answers on the answer sheet provided for this purpose.

Question 1: Differentiate between the responsibilities of the network layer and the transport layer of the OSI Reference Model. Name one standards-based protocol at each layer.

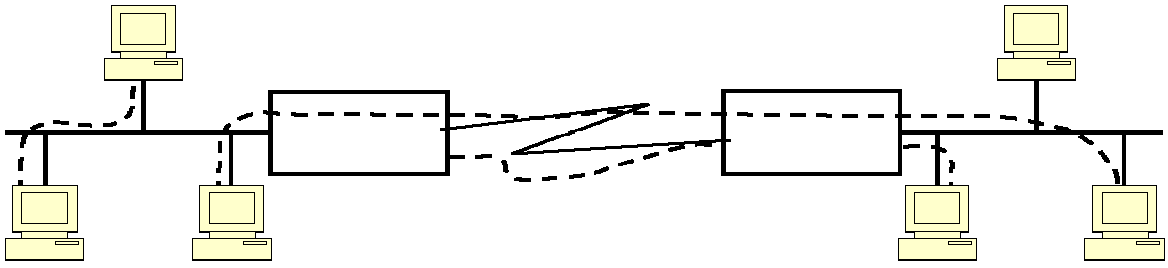
Question 2: What is the difference between switched networks and broadcast networks? Why is the broadcast model of transmission suitable for a local area network?

Question 3: Name the types of intermediate systems which work on the layer 1, 2 and 3 of the OSI Reference Model respectively. What are the names of the PDU's that each one of these intermediate systems handle or work with?

Question 4: Label the ten unlabeled parts of the following figure:



Question 5: Label each item in the following figure and define each term you label:



Question 6: Give three advantages and disadvantages of a layered approach to the design of computer networking systems. You must support your answer with arguments and examples.

Question 7: How has the Internet been changing its behavior over the years? Give at least four examples. For each example mention who has been affected positively by the change in the Internet and who has been affected negatively.

Question 8: Given below are two figures showing the Electromagnetic Spectrum and the Acoustic Spectrum respectively. Based on these two figures answer the following questions:
(a) Which of the two operates at higher frequencies AM or FM?
(b) Can coaxial cable be used to carry visible light?
(c) Can coaxial cable be used to carry Television signals?
(d) Which has higher frequency content in it, music or speech?
(e) Out of AM, FM and the Telephone channel, which one transmits the smallest band of voice frequencies?

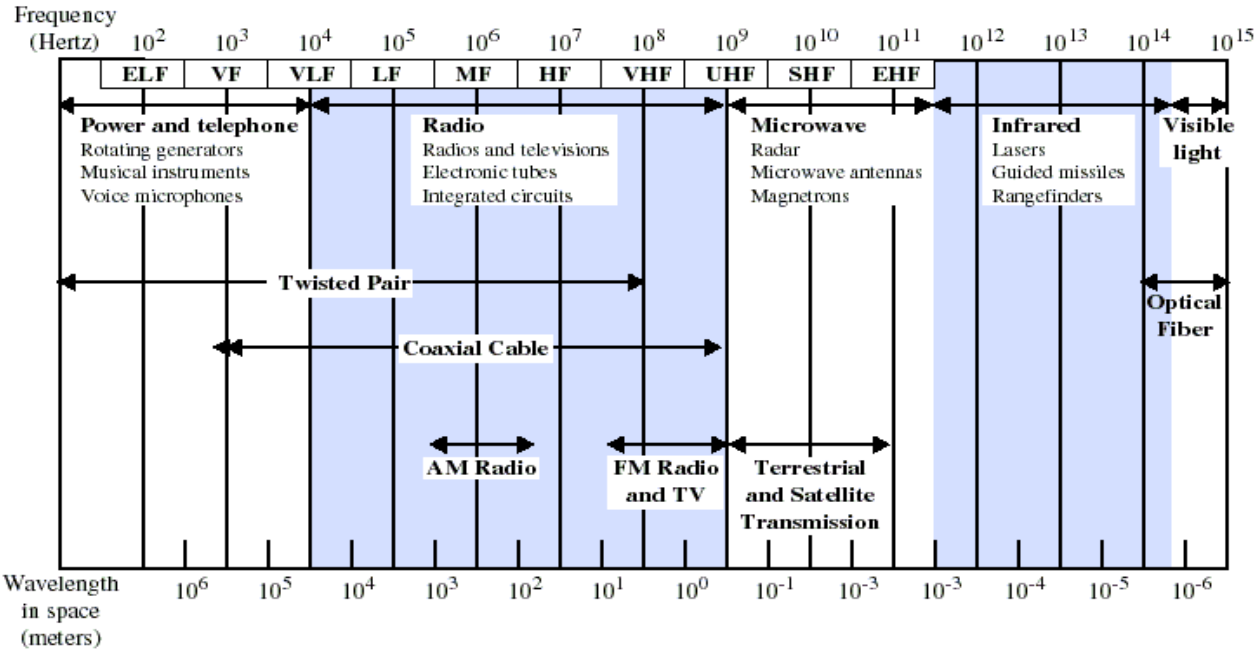


Figure 4.14 Electromagnetic Spectrum for Telecommunications