Sheet (1)- Overview

1- A network contains four computers. If there are only four lengths of cable in this network, which topology is used?

2- Which transmission mode (simplex, half-duplex, or full duplex) can be compared to the following?
   a. A heated argument between Lucy & Desi
   b. A computer to monitor connection
   c. A television broadcast

3- Which layer is responsible for the following?
   a. Determining the best path to route packets
   b. Providing end-to-end communications with reliable service
   c. Providing node-to-node communications with reliable service

4- Give two features that the datalink layer and the transport layer have in common. Give two features in which they differ.

5- Describe the five layers of the Internet network model and what they do.

6- Multiple choice

   a) A ________ is a physical communication pathway that transfers data from one device to another

      ☐  Node
      ☐  Message
      ☐  Link
      ☐  Receiver

   b) A _______ line configuration provides a dedicated link between two devices.

      ☐  Point to point
      ☐  Receiver to sender
      ☐  Multipoint
      ☐  Any of the above

   c) ____________ refers to the way two or more devices attach to a link

      ☐  Line configuration
      ☐  Topology
      ☐  Transmission mode
      ☐  Modulation mode
d) Which of the following is a basic network topology?
   - Star
   - Mesh
   - Ring
   - All of the above

e) Seven devices are arranged in a mesh topology. ________ physical channels link these devices.
   - Seven
   - Six
   - Twenty
   - Twenty-one

f) In a mesh topology with n devices, if a new device is added, ________ new links are needed.
   - n-1
   - n
   - n+1
   - 2n

g) As the data packet moves from the lower to the upper layers, headers are ________
   - Added
   - Removed
   - Rearranged
   - Modified

h) Which layer functions a liaison between user support layers and network support layers?
   - Network layer
   - Physical layer
   - Transport layer
   - Application layer

i) The ______________ layer changes bits into electromagnetic signals
   - Network layer
   - Physical layer
   - Transport layer
   - Application layer

j) The process to process delivery of the entire message is the responsibility of the ________ layer.
   - Network layer
   - Physical layer
   - Transport layer
   - Application layer