

**COE 344 – Quiz # 5**

Name:

**Key Solution (15)**

ID#:

1. (3 points) How does the Link Layer **differ** from the Transport Layer? (**two differences**)
  - a. **Link layer tries to assure reliable data transfer over the direct link while the transport layer is assuring the reliability over the logical end-to-end connection.**
  - b. **No congestion control in link layer**
  - c. **No link access in transport compared to link layer**
  
2. (2 points) State **two** Link Layer services.
  - a. **Error detection and correction**
  - b. **framing and addressing**
  - c. **reliable data transfer**
  - d. **flow control**
  - e. **link access**
  - f. **full duplex or half-duplex link**
  
3. (10 points) We discussed in the class three broad categories of multiple access protocols. What are these categories and give one practical example for each category. And specify what application (s) is more suitable for each category and why.

	Cat1: <b>Channel partitioning</b>	Cat2: <b>Random Access</b>	Cat3: <b>Taking turns</b>
Example	<b>FDMA,TDMA, CDMA</b>	<b>ALOHA, CSMA</b>	<b>Polling, token ring</b>
Applications	Voice applications	Data traffic applications such satellite data communication	High data traffic load also voice applications
Justification	Its constant bit rate characteristic makes it very suitable for this partitioning as it will be active most of the time and therefore the utilization is high	Its variable bit rate characteristic makes it very suitable for this random access especially if the traffic load is small.	This type of access provides a maximum delay which is very suitable for applications such as multimedia, voice, banking transactions