KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

DIPLOMA IN COMPUTER SCIENCE (CC101)

TNW2033: Data Communications Concept

TUTORIAL 1

CHAPTER 1: INTRODUCTION TO DATA COMMUNICATIONS

1.   Identify the five components of a data communication system.

2.   What are the three criteria necessary for an effective and efficient network?

3.   What are the advantages of a multipoint connection over a point-to-point connection?

4.   When a party makes a local telephone call to another party, is this a point-to-point or multipoint line configuration? Explain your answer.

5.   For each of the following four networks, discuss the consequences if a connection fails:

   a.   5 devices arranged in a mesh topology

   b.   5 devices arranged in a star topology (not counting the hub)

   c.   5 devices arranged in a bus topology

   d.   5 devices arranged in a ring topology.

6.   **Figure 1** shows a network topology in which each device has a dedicated point-to-point link to every other device.
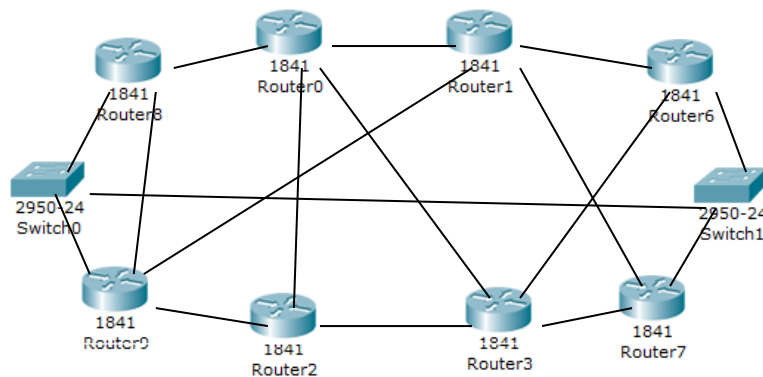

Figure 1

   a.   What type of topology shown in **Figure1**?

   b.   How many ports are needed for each device?
   (Show the formula and calculation)

   c.   How many cables are needed for the topology above?
   (Show the formula and calculation)