

INTELLIGENT TRANSPORTATION SYSTEMS

COMMUNICATIONS ISSUES

DISCUSSION ISSUES

Note: Be prepared to answer the following questions.

Question 1.

What is the purpose of telecommunications systems within the ITS framework? What are the major components of telecommunications systems?

Question 2.

Think of examples of ITS applications that require:

- a. one-way communications;
- b. two-way communications;
- c. wireless communications;
- d. short range communications;
- e. wide area communications.

Question 3.

What are the advantages of fiber optic cables over traditional wirelines such as coaxial and twisted pair?

Question 4.

In your own words explain what is RF spectrum acquisition and why is it important for ITS Applications.

Question 5.

Discuss how telecommunications can facilitate the determination of vehicle location and how this information can be used within the ITS context.

Question 6.

Do urban and rural environments have similar or different needs for ITS communication support? Why?

Question 7.

Develop a list of criteria based on which the selection of ITS telecommunication technologies should be based.

Question 8.

Discuss advantages and disadvantages from the deployment of dedicated ITS communication systems over leasing services from existing telecommunication providers.