High Speed Networks TEE5233

Assignment 1

Due 17 May 1300hrs

Question 1

a) Show the set up of the Asynchronous Transfer Mode packets. State the reason for the choice and length of the packets. [4marks]
b) Describe the functions and application of the ATM header format for the subnet interface and for the internal subnet. [6 marks]
c) Give four factors that are considered in the choice of a suitable network topology. [4 marks]
d) Describe four topologies found in networks, for each state the advantage and drawback for its application. [6marks]

Question 2

a) Show a block diagram of an 1SDN system with PBX for use in large businesses. [10 marks]
b) Draw and explain the DQDB (IEEE 802.6) as used in MAN. [10 marks]

Question 3

Describe the Basic Service and the Primary Service. [20]

Question 4

Discuss briefly at least five error detection and control methods, stating advantages and disadvantages. [20 marks]

Question 5

a) In the formulation of the Queuing theory state at least Seven factors that are considered. [7 marks]
b) Give three basic statements that are used to define the Poisson arrival process. [6 marks]
c) State the functions of IEEE 802.3 (Ethernet) CSMA/CD. Explain its implementation [7marks]