

II B.Tech. II Semester Regular Examinations, April/May -2005

DATA COMMUNICATIONS

(Electronics & Computer Engineering)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. What are the types of modems? Explain about any one of the modem? What are Data modems?
2. (a) What is Data Communications? Explain briefly?
(b) Mention some standard organizations for Data Communications?
3. (a) What are the types of Data transmission Modes and explain?
(b) What are the types of Data Communications Protocols and give the Final Fram Format in these protocols.
4. Describe a local area network? What is the connecting medium used with local area networks? Explain the two transmission formats used with local area networks?
5. (a) Differentiate between PAP and CHAP.
(b) Give an overview of different switching methods
6. (a) What is PLB? Explain its role.
(b) Discuss about virtual circuits in X.25.
7. (a) How does a frame get retransmitted in frame relay?
(b) Can two devices connected to the same frame relay network use the same DLCI's?
8. Discuss the location of overhead information for each SONET layer.

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1. What is Data Communication? What are there possible ways of Data transmission and explain.
2. (a) Explain about Checksum method for error detection?
(b) Explain about vertical and horizontal redundancy checking methods for error detection?
3. (a) What is the Difference between selection and polling? And explain.
(b) Explain about Control field on SDLC protocol?
4. (a) Draw the block diagram of a typical local area network component configuration and explain.
(b) Write wide range of data services, where LAN's are used extensively.
5. (a) Differentiate between PAP and CHAP.
(b) Give an overview of different switching methods
6. (a) Explain different PLP Control packet types with their formats
(b) What is X.121 Protocol.
7. (a) Differentiate between PVC and SVC in frame relay.
(b) Discuss about different frame relay layers.
8. (a) Discuss how STS s can be multiplexed to get a new STS with a higher data rate.
(b) Explain how overhead and data in an STS-1 are arranged in a matrix configuration.

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1. (a) What are the differences between Asynchronous modems and synchronous modems?
(b) Explain about synchronous modems?
2. (a) What is Serial Interfaces? What are the various standard Interfaces?
(b) Explain about RS-232 Interface?
3. (a) What is a transparent switch? A transactional switch.
(b) What are the purposes of the nr and ns sequences on SDLC? What is delimiting sequence?
4. Describe the topologies commonly used with LANs?
5. (a) Differentiate between PAP and CHAP.
(b) Give an overview of different switching methods
6. (a) What is PLB? Explain its role.
(b) Discuss about virtual circuits in X.25.
7. (a) Describe different service classes defined by ATM forum.
(b) Give network-related attributes of ATM.
8. Discuss the location of overhead information for each SONET layer.

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1. Draw OIS architectural model for open system inter networking and explain.
2. (a) For the following string of asynchronous ASCII-encoded data, identify each character (assume even parity and 2 stop bits).
(b) For the following string of synchronous ASCII-encoded data, identify each character (assume odd parity).
3. (a) Why are Synchronous characters always transmitted in pairs? Give example also.
(b) What is an SPA? An SSA? What is the purpose of a leading pad? A trailing pad?
4. Describe the topologies commonly used with LANs?
5. (a) What is DQDB? Explain different DQDB network architectures.
(b) Discuss about DQDB protocol architecture.
6. (a) What is ISDN? Describe the services provided by it.
(b) Discuss the evolution of ISDN.
7. (a) Discuss the advantages and disadvantages of frame relay over X.25 networks.
(b) Discuss about frame relay operation.
8. How many VT2s, VT3s and VT6s can be carried in an STS-1 frame?
