

2008-COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

B.TECH IV SEMESTER MODEL EXAMINATION

DATA COMMUNICATION

(COMPUTER SCIENCE AND ENGINEERING)

TIME-3HOUR

MARKS-100

ANSWER ALL QUESTIONS

SECTION A [8*5=40]

1. a) What are the advantages of digital transmission?
- b) What are the most significant transmission impairments?
- c) Write note on constellation pattern?
- d) Describe the advantages of biphase coding techniques.
- e) Compare between synchronous and asynchronous transmission techniques.
- f) What is piggybacking?
- g) How is interference avoided by using FDM?
- h) What is CDMA?

SECTION B [4*15=60]

2. a) Describe different types of noises.
- b) Write short notes on 1.channel capacity 2.bandwidth.

OR

3. a) Derive and compare the equations that rule the channel capacity and bandwidth.
- b) Describe different transmission terminologies.
4. a) Describe different digital signal encoding formats. With the help of neat diagrams represent the digital data 01001100011.

OR

5. a) Describe any two modulation techniques used in codecs.
- b) Short notes on 1. B8ZS 2. HDB3
6. a) What are the reasons for breaking a long data transmission up into a number of frames?
- b) List and explain three different ways in which the CRC algorithm can be described.

OR

7. a) List and briefly describe some of the requirements for effective communication over a data link.
- b) List and describe the three versions of ARQ.

8. a) Why is a statistical time division multiplexer more efficient than a synchronous time division multiplexer? Compare them.

OR

9. a) List three benefits of spread spectrum.

b) What is frequency hopping spread spectrum?

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