Code.No: **RR310405**

RR

SET-1

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
DIGITAL COMMUNICATIONS
(COMMON TO ECE, ETM)

Time: 3hours **Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks
- - -

1. Explain about different sampling methods? [16]

2. Discuss about the method of generation and detection of pulse width modulation?
 [16]

3. Draw the block diagram for base band binary data transmission. Explain the operation of each block? [16]

4. Why equalization is compulsory in Base band transmission? Explain about adaptive equalizer [16]

5. Draw the block diagram for differential pulse code modulation? Explain its operation?
 [16]

6. Derive the expression for signal to noise ratio of PCM system? [16]

7. Draw the block diagram for differential phase shift keying modulation and demodulation? Explain its operation? [16]

8. The parity check matrix for a(6, 3) linear block code is given as

$$H = \begin{bmatrix} 1 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$$

a) Find the generator matrix
b) Find all the possible code words
c) Find the Hamming distance. [16]

--ooOoo--

Code.No: **RR310405**

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SET-2

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
DIGITAL COMMUNICATIONS
(COMMON TO ECE, ETM)

Time: 3hours   **Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks
- - -

1.   Draw the block diagram for base band binary data transmission. Explain the operation of each block?   [16]

2.   Why equalization is compulsory in Base band transmission? Explain about adaptive equalizer   [16]

3.   Draw the block diagram for differential pulse code modulation? Explain its operation?
                                                                                                       [16]

4.   Derive the expression for signal to noise ratio of PCM system?   [16]

5.   Draw the block diagram for differential phase shift keying modulation and demodulation? Explain its operation?   [16]

6.   The parity check matrix for a(6, 3) linear block code is given as

$$H = \begin{bmatrix} 1 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$$

a) Find the generator matrix
b) Find all the possible code words
c) Find the Hamming distance.   [16]

7.   Explain about different sampling methods?   [16]

8.   Discuss about the method of generation and detection of pulse width modulation?
                                                                                                       [16]

--ooOoo--

Code.No: **RR310405**   RR   SET-3

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
DIGITAL COMMUNICATIONS
(COMMON TO ECE, ETM)

Time: 3hours   **Max.Marks:80**
Answer any FIVE questions
All questions carry equal marks
- - -

1.   Draw the block diagram for differential pulse code modulation? Explain its operation?
                                                                                    [16]

2.   Derive the expression for signal to noise ratio of PCM system?   [16]

3.   Draw the block diagram for differential phase shift keying modulation and demodulation? Explain its operation?   [16]

4.   The parity check matrix for a(6, 3) linear block code is given as

$$H = \begin{bmatrix} 1 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$$

a) Find the generator matrix
b) Find all the possible code words
c) Find the Hamming distance.   [16]

5.   Explain about different sampling methods?   [16]

6.   Discuss about the method of generation and detection of pulse width modulation?
                                                                                    [16]

7.   Draw the block diagram for base band binary data transmission. Explain the operation of each block?   [16]

8.   Why equalization is compulsory in Base band transmission? Explain about adaptive equalizer   [16]

--ooOoo--

Code.No: **RR310405** | **RR** | SET-4

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
DIGITAL COMMUNICATIONS
(COMMON TO ECE, ETM)

Time: 3hours   **Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks
- - -

1. Draw the block diagram for differential phase shift keying modulation and demodulation? Explain its operation?   [16]

2. The parity check matrix for a(6, 3) linear block code is given as

$$H = \begin{bmatrix} 1 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$$

    a) Find the generator matrix
    b) Find all the possible code words
    c) Find the Hamming distance.   [16]

3. Explain about different sampling methods?   [16]

4. Discuss about the method of generation and detection of pulse width modulation?
                                                                                           [16]

5. Draw the block diagram for base band binary data transmission. Explain the operation of each block?   [16]

6. Why equalization is compulsory in Base band transmission? Explain about adaptive equalizer   [16]

7. Draw the block diagram for differential pulse code modulation? Explain its operation?
                                                                                           [16]

8. Derive the expression for signal to noise ratio of PCM system?   [16]

--ooOoo--