

SUBJECT : ADVANCED DIGITAL COMMUNICAITON SYSTEM

Day : -Monday
Date : 03/12/2018

W-2018-3112

Time : 11.00 AM TO 02.00 PM
Max. Marks : 60

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SEPARATE** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data, if necessary.

SECTION – I

Q. 1 With neat waveforms explain the operation of Minimum Shift Keying. (10)

OR

A binary sequence 1 1 0 1 0 0 1 0 0 1 is applied to DPSK & QPSK Transmitter. Sketch and explain the resulting waveforms at the transmitter output. (10)

Q. 2 Discuss in detail various aspects of Matched filter. State and explain properties of Matched filter. (10)

OR

Derive an expression for minimum error probability of coherent DPSK system. (10)

Q. 3 With a neat diagram explain Reed Soloman encoding & decoding circuit. (10)

OR

The generator polynomial of cyclic code is $G(P)=P^3+P^2+1$. Find all code vectors for the code in non-systematic form. (10)

SECTION – II

Q. 4 Draw and explain the statistical models for fading channels. (10)

OR

With a neat diagram explain diversity techniques used for fading multipath channels. (10)

Q. 5 Describe in detail Trellis coded modulation. (10)

OR

With a neat block diagram explain the operation of IS-95 forward link. (10)

Q. 6 Enumerate the OFDM multicarrier modulation technique with suitable diagrams. (10)

OR

What is Frequency Diversity? Describe any one frequency diversity technique in detail. (10)

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