Reg. No. :

Question Paper Code: 52205

M.E. DEGREE EXAMINATION, MAY 2017

Elective

Communication Systems

15PCM526 - APPLICATION OF DSP TECHNIQUES IN COMMUNICATION SYSTEMS

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) Explain in detail about Echo cancellation in telecommunication systems.   (20)

Or

(b) Discuss voice compression and waveform generation with suitable block diagram.

(20)

2. (a) Explain the functional block diagram of the digital frequency selective fading simulator.   (20)

Or

(b) Explain the working of digital frequency selective fading simulator with neat block diagram.   (20)

3. (a) Discuss in detail about Adaptive Signal Equalisation for Frequency Discriminator Output Signal in a Mobile Channel.   (20)

Or

(b) Draw the block diagram of the system for Rician fading channel, explain in detail.

(20)

4. (a) Discuss the types of DSP based diversity modems. (20)

Or

(b) Explain in detail about an eight-level-soft-decision SST-type viterbi error- trellis decoding system of punctured convolutional codes. (20)

5. (a) Explain in detail about data acquisition, sampling and power spectrum of radar image also draw the flow diagram of the range-doppler algorithm. (20)

Or

(b) Explain in detail about Stolt interpolation processing of SAR data with necessary equations. (20)

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