

125.

Roll No.

23336

**M. E./M. Tech 1st Sem. Emb. Sys &
VLSI Dgn**

Examination – June, 2013

SIGNAL PROCESSING

Paper : MT-VLES-509

Time : Three hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) What are different types of Equalization Techniques? 10
- (b) Discuss blind Deconvolution and its applications. 10
2. (a) Explain features of the source filter model and speech models. 10
- (b) Explain Information speech coding. 10

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3. (a) What are the types of signal processing ? Discuss Linear Time Invariant System. 10
(b) Write short note on musical notes and music coding. 10
4. (a) What is the need for the Time Delay Estimation ? 10
(b) Discuss relation between the SNR level and TDE. 10
5. (a) State and explain TDE methods. 10
(b) Discuss Ideal model-free field environment. 10
6. Discuss generic model classes for system identification. 20
7. (a) What are different decompositions used for matrix formulation for least square estimation. 10
(b) Explain Gram V Schmidt orthogonalization. 10
8. Write a short note on (any *two*) : 20
(a) Need for channel equalization,
(b) Application of speech processing,
(c) Review of Basic Physics of sounds.
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