

Code :R5321105

R5

III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011
BIOMEDICAL SIGNAL PROCESSING
(Biomedical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Define Relative Frequency.
(b) Explain Conditional Probability with an example.
(c) Explain Joint probability with an example.
2. (a) Write the Properties of auto correlation.
(b) Write the Properties of power spectral density.
3. (a) Expand CORTES and explain the process of data compression using CORTES.
(b) Compare the performance of CORTES with that of turning point algorithm and AZTEC.
4. (a) Explain the detection of Premature Ventricular Contraction(PVC).
(b) Explain the detection of Left Ventricular Hypertrophy (LVH).
5. Write short note on
(a) Write the differences between static filter and adaptive filter.
(b) Explain the principle of an adaptive filter.
6. Write the importance of Yule-walker equations in signal modeling? Explain with one example.
7. According to autoregressive process derive the following parameters.
(a) First order AR parameters.
(b) Mean square error.
8. (a) In the original prony's problem is basically a non-linear problem. Illustrate this for the case of two exponents.
(b) Identify the beginning of s1 in a PCG signal and draw the waveform.
