

Code No: R05321103

R05**Set No. 2**

III B.Tech II Semester Examinations, December 2010
BIOMEDICAL SIGNAL PROCESSING
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

1. What is the relationship, if any between the constituents of the complex exponential model used in prony's method and that used in Fourier series? Explain. [16]
2. (a) Based on the differentiation technique, how is QRS detection done from the given ECG recording.
 (b) Discuss any one template matching technique to detect QRS complex. [8+8]
3. (a) Discuss the selection of data compression algorithm for the ECG data compression.
 (b) What are drawbacks in Hoffman coding. [10+6]
4. (a) Explain stationary random processes with an example.
 (b) Write the Properties of Characteristic function. [8+8]
5. (a) Distinguish between Gaussian and Rayleigh distributions giving examples for each.
 (b) Draw the Rayleigh density and distribution functions and explain. [10+6]
6. (a) Discuss how the EEG signals are generated. Give a model of EEG signal.
 (b) Explain the algorithm to detect the spikes and complexes using AR technique. [8+8]
7. (a) Explain the adaptive noise canceling with block diagram
 (b) Explain the applications of ANC in biomedical signal enhancement [8+8]
8. (a) Write the different applications of Autoregressive process.
 (b) Explain the Yule-Walker method. [8+8]

Code No: R05321103

R05**Set No. 4**

III B.Tech II Semester Examinations, December 2010
BIOMEDICAL SIGNAL PROCESSING
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Discuss how the EEG signals are generated. Give a model of EEG signal.
(b) Explain the algorithm to detect the spikes and complexes using AR technique. [8+8]
2. (a) Write the different applications of Autoregressive process.
(b) Explain the Yule-Walker method. [8+8]
3. (a) Distinguish between Gaussian and Rayleigh distributions giving examples for each.
(b) Draw the Rayleigh density and distribution functions and explain. [10+6]
4. (a) Explain the adaptive noise canceling with block diagram
(b) Explain the applications of ANC in biomedical signal enhancement [8+8]
5. What is the relationship, if any between the constituents of the complex exponential model used in Prony's method and that used in Fourier series? Explain. [16]
6. (a) Explain stationary random processes with an example.
(b) Write the Properties of Characteristic function. [8+8]
7. (a) Discuss the selection of data compression algorithm for the ECG data compression.
(b) What are drawbacks in Huffman coding. [10+6]
8. (a) Based on the differentiation technique, how is QRS detection done from the given ECG recording.
(b) Discuss any one template matching technique to detect QRS complex. [8+8]

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R05**Set No. 1**

III B.Tech II Semester Examinations, December 2010
BIOMEDICAL SIGNAL PROCESSING
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Based on the differentiation technique, how is QRS detection done from the given ECG recording.
(b) Discuss any one template matching technique to detect QRS complex. [8+8]
2. (a) Discuss how the EEG signals are generated. Give a model of EEG signal.
(b) Explain the algorithm to detect the spikes and complexes using AR technique. [8+8]
3. (a) Distinguish between Gaussian and Rayleigh distributions giving examples for each.
(b) Draw the Rayleigh density and distribution functions and explain. [10+6]
4. (a) Write the different applications of Autoregressive process.
(b) Explain the Yule-Walker method. [8+8]
5. What is the relationship, if any between the constituents of the complex exponential model used in Prony's method and that used in Fourier series? Explain. [16]
6. (a) Explain stationary random processes with an example.
(b) Write the Properties of Characteristic function. [8+8]
7. (a) Discuss the selection of data compression algorithm for the ECG data compression.
(b) What are drawbacks in Huffman coding. [10+6]
8. (a) Explain the adaptive noise canceling with block diagram
(b) Explain the applications of ANC in biomedical signal enhancement [8+8]

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R05**Set No. 3**

III B.Tech II Semester Examinations, December 2010
BIOMEDICAL SIGNAL PROCESSING
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Discuss the selection of data compression algorithm for the ECG data compression.
(b) What are drawbacks in Hoffman coding. [10+6]
2. What is the relationship, if any between the constituents of the complex exponential model used in prony's method and that used in Fourier series? Explain. [16]
3. (a) Discuss how the EEG signals are generated. Give a model of EEG signal.
(b) Explain the algorithm to detect the spikes and complexes using AR technique. [8+8]
4. (a) Write the different applications of Autoregressive process.
(b) Explain the Yule-Walker method. [8+8]
5. (a) Based on the differentiation technique, how is QRS detection done from the given ECG recording.
(b) Discuss any one template matching technique to detect QRS complex. [8+8]
6. (a) Explain stationary random processes with an example.
(b) Write the Properties of Characteristic function. [8+8]
7. (a) Explain the adaptive noise canceling with block diagram
(b) Explain the applications of ANC in biomedical signal enhancement [8+8]
8. (a) Distinguish between Gaussian and Rayleigh distributions giving examples for each.
(b) Draw the Rayleigh density and distribution functions and explain. [10+6]
