Code No: 56048   **Set No. 1**

Name: _____ Hall Ticket No. ☐☐☐☐☐ A ☐☐☐☐

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I   Choose the correct alternative:

1.   The _____ algorithm where the mean square error is minimized through the iteration [   ]
        a) Steepest gradient   b) LMS   c) widrow hoff LMS   d) both b & c

2.   The steady state output of a wiener filter for an Autoregressive process is entirely   [   ]
        a) Predictable   b) Unpredictable   c) Fixed   d) Known

3.   A Wiener filter or a matched filter is an example of a _____ filter   [   ]
        a) Non-linear   b) Fixed   c) Transversal   d) Adaptive

4.   _____ is a digital technique for separating a repetitive signal from noise   [   ]
        a) Signal averaging   b) Filtering   c) Exponential averaging   d) Averaging

5.   The assumption made in the signal averaging theory is that noise is   [   ]
        a) Random   b) White   c) Gaussian   d) Flicker

6.   In which stage the delta waves exceeding 75µv for greater than 50% of the time.   [   ]
        a) stage-1   b) stage-2   c) stage-3   d) stage-4

7.   Number of electrodes used to record mothers ECG in enhancing fetal ECG using ANC is [   ]
        a) Abdominal leads   b) Chest leads   c) Both   d) None

8.   In contraction of a skeletal muscle, action potentials are generated in the   [   ]
        a) Brain   b) Skeletal muscle   c) Nerve lesion   d) Motor units

9.   For h(n) to converge to its optimal value h_{opt} is   [   ]
        a) $0< \mu<1/R$ b) 1   c) R   d) $0<\mu<R$

10.   Prony's spectrum of the prosthetic mitral valve sound is characterized by _____ peaks   [   ]
        a) 2   b) 3   c) 5   d) 4

II   Fill in the blanks

11.   _____ is a biphasic wave that has a total duration of 0.5- 1 sec.

12.   In steepest descent algorithm the filter parameter h is made as _____

13.   To extract fetal ECG the primary input to adaptive filter is provide through single _____

14.   Adaptive techniques are used for _____ cancellation

15.   Recording sleep stages is called _____

16.   There are two forms of the electrical activity: the first is known as an evoked potential the second is an _____ electrical activity.

17.   The rate of information transfer of the brain is slow being ten to _____ bits/second.

18.   Transients are invariably associate with abnormalities know as_____

19.   _____approximates the wave form by a linear combination of damped exponents.

20.   _____ is a non invasive tool for the detection of neurological disorders.

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Code No: 56048   **Set No. 2**

Name: _____ Hall Ticket No. ☐☐☐☐☐ A ☐☐☐☐

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I   Choose the correct alternative:

1.   _____ is a digital technique for separating a repetitive signal from noise   [   ]
      a) Signal averaging   b) Filtering   c) Exponential averaging   d) Averaging

2.   The assumption made in the signal averaging theory is that noise is   [   ]
      a) Random   b) White   c) Gaussian   d) Flicker

3.   In which stage the delta waves exceeding 75μv for greater than 50% of the time.   [   ]
      a) stage-1   b) stage-2   c) stage-3   d) stage-4

4.   Number of electrodes used to record mothers ECG in enhancing fetal ECG using ANC is [   ]
      a) Abdominal leads   b) Chest leads   c) Both   d) None

5.   In contraction of a skeletal muscle, action potentials are generated in the   [   ]
      a) Brain   b) Skeletal muscle   c) Nerve lesion   d) Motor units

6.   For h(n) to converge to its optimal value h_{opt} is   [   ]
      a) $0< \mu<1/R$ b) 1   c) R   d) $0<\mu<R$

7.   Prony's spectrum of the prosthetic mitral valve sound is characterized by _____ peaks   [   ]
      a) 2   b) 3   c) 5   d) 4

8.   The _____ algorithm where the mean square error is minimized through the iteration [   ]
      a) Steepest gradient   b) LMS   c) widrow hoff LMS   d) both b & c

9.   The steady state output of a wiener filter for an Autoregressive process is entirely [   ]
      a) Predictable   b) Unpredictable   c) Fixed   d) Known

10.   A Wiener filter or a matched filter is an example of a _____ filter   [   ]
      a) Non-linear   b) Fixed   c) Transversal   d) Adaptive

II   Fill in the blanks

11.   Adaptive techniques are used for _____ cancellation

12.   Recording sleep stages is called _____

13.   There are two forms of the electrical activity: the first is known as an evoked potential the second is an _____ electrical activity.

14.   The rate of information transfer of the brain is slow being ten to _____ bits/second.

15.   Transients are invariably associate with abnormalities know as_____

16.   _____approximates the wave form by a linear combination of damped exponents.

17.   _____ is a non invasive tool for the detection of neurological disorders.

18.   _____ is a biphasic wave that has a total duration of 0.5- 1 sec.

19.   In steepest descent algorithm the filter parameter h is made as _____

20.   To extract fetal ECG the primary input to adaptive filter is provide through single _____

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Code No: 56048   **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
III B.Tech. II Sem., II Mid-Term Examinations, April – 2014
BIOMEDICAL SIGNAL PROCESSING
Objective Exam

Name: _____ Hall Ticket No. | | | | | |A| | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I   Choose the correct alternative:

1.   In which stage the delta waves exceeding 75µv for greater than 50% of the time.   [   ]
       a) stage-1   b) stage-2   c) stage-3   d) stage-4

2.   Number of electrodes used to record mothers ECG in enhancing fetal ECG using ANC is [   ]
       a) Abdominal leads   b) Chest leads   c) Both   d) None

3.   In contraction of a skeletal muscle, action potentials are generated in the   [   ]
       a) Brain   b) Skeletal muscle   c) Nerve lesion   d) Motor units

4.   For h(n) to converge to its optimal value h_{opt} is   [   ]
       a) $0< \mu<1/R$ b) 1   c) R   d) $0<\mu<R$

5.   Prony's spectrum of the prosthetic mitral valve sound is characterized by _____ peaks   [   ]
       a) 2   b) 3   c) 5   d) 4

6.   The _____ algorithm where the mean square error is minimized through the iteration [   ]
       a) Steepest gradient   b) LMS   c) widrow hoff LMS   d) both b & c

7.   The steady state output of a wiener filter for an Autoregressive process is entirely   [   ]
       a) Predictable   b) Unpredictable   c) Fixed   d) Known

8.   A Wiener filter or a matched filter is an example of a _____ filter   [   ]
       a) Non-linear   b) Fixed   c) Transversal   d) Adaptive

9.   _____ is a digital technique for separating a repetitive signal from noise   [   ]
       a) Signal averaging   b) Filtering   c) Exponential averaging   d) Averaging

10.   The assumption made in the signal averaging theory is that noise is   [   ]
       a) Random   b) White   c) Gaussian   d) Flicker

II   Fill in the blanks

11.   There are two forms of the electrical activity: the first is known as an evoked potential the second is an _____ electrical activity.

12.   The rate of information transfer of the brain is slow being ten to _____ bits/second.

13.   Transients are invariably associate with abnormalities know as_____

14.   _____approximates the wave form by a linear combination of damped exponents.

15.   _____ is a non invasive tool for the detection of neurological disorders.

16.   _____ is a biphasic wave that has a total duration of 0.5- 1 sec.

17.   In steepest descent algorithm the filter parameter h is made as _____

18.   To extract fetal ECG the primary input to adaptive filter is provide through single _____

19.   Adaptive techniques are used for _____ cancellation

20.   Recording sleep stages is called _____

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Code No: 56048   **Set No. 4**

Name: _____ Hall Ticket No. | | | | | |A| | | | |

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I   Choose the correct alternative:

1.   In contraction of a skeletal muscle, action potentials are generated in the   [   ]
        a) Brain   b) Skeletal muscle   c) Nerve lesion   d) Motor units

2.   For h(n) to converge to its optimal value h_{opt} is   [   ]
        a) $0 < \mu < 1/R$ b) 1   c) R   d) $0 < \mu < R$

3.   Prony's spectrum of the prosthetic mitral valve sound is characterized by _____ peaks   [   ]
        a) 2   b) 3   c) 5   d) 4

4.   The _____ algorithm where the mean square error is minimized through the iteration [   ]
        a) Steepest gradient   b) LMS   c) widrow hoff LMS   d) both b & c

5.   The steady state output of a wiener filter for an Autoregressive process is entirely   [   ]
        a) Predictable   b) Unpredictable   c) Fixed   d) Known

6.   A Wiener filter or a matched filter is an example of a _____ filter   [   ]
        a) Non-linear   b) Fixed   c) Transversal   d) Adaptive

7.   _____ is a digital technique for separating a repetitive signal from noise   [   ]
        a) Signal averaging   b) Filtering   c) Exponential averaging   d) Averaging

8.   The assumption made in the signal averaging theory is that noise is   [   ]
        a) Random   b) White   c) Gaussian   d) Flicker

9.   In which stage the delta waves exceeding 75μv for greater than 50% of the time.   [   ]
        a) stage-1   b) stage-2   c) stage-3   d) stage-4

10.   Number of electrodes used to record mothers ECG in enhancing fetal ECG using ANC is [   ]
        a) Abdominal leads   b) Chest leads   c) Both   d) None

II Fill in the blanks

11. Transients are invariably associate with abnormalities know as_____

12. _____approximates the wave form by a linear combination of damped exponents.

13. _____ is a non invasive tool for the detection of neurological disorders.

14. _____ is a biphasic wave that has a total duration of 0.5- 1 sec.

15. In steepest descent algorithm the filter parameter h is made as _____

16. To extract fetal ECG the primary input to adaptive filter is provide through single _____

17. Adaptive techniques are used for _____ cancellation

18. Recording sleep stages is called _____

19. There are two forms of the electrical activity: the first is known as an evoked potential the second is an _____ electrical activity.

20. The rate of information transfer of the brain is slow being ten to _____ bits/second.

-oOo-