Code No: 07A31102 **R07** **Set No. 2**

II B.Tech I Semester Examinations,MAY 2011
BIOELECTRICITY AND ELECTRODES
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What is the effect of Galavanism (constant current) on nerve or Muscle? Explain the term depolarization. [16]
2. Write a note on "Physiotherapy instruments". [16]
3. What is all or none principle? Explain how action potentials are recorded. [16]
4. (a) What are precordial leads. Explain with neat circuit diagram.
   (b) Interpret the ECG as a case of Cardiac transmission waveform. [8+8]
5. (a) Drawing their equivalent circuits, neatly explain the properties of needle electrode and microelectrode?
   (b) Give two applications of above two electrodes. [10+6]
6. Explain the 10-20 electrode system used in the measurement of EEG. Plot the different brain waves and give its frequency and amplitude ranges. [16]
7. (a) How are EPP and MEPP generated in skeletal muscle? Explain.
   (b) Discuss about electrical activity of skeletal muscles in detail? [8+8]
8. Discribe the origin for generating bio-electricity at the cellular and sub- cellular level. [16]

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Code No: 07A31102 **R07** **Set No. 4**

II B.Tech I Semester Examinations,MAY 2011
BIOELECTRICITY AND ELECTRODES
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What is the effect of Galavanism (constant current) on nerve or Muscle? Explain the term depolarization. [16]
2. (a) What are precordial leads. Explain with neat circuit diagram.
   (b) Interpret the ECG as a case of Cardiac transmission waveform. [8+8]
3. (a) How are EPP and MEPP generated in skeletal muscle? Explain.
   (b) Discuss about electrical activity of skeletal muscles in detail? [8+8]
4. (a) Drawing their equivalent circuits, neatly explain the properties of needle electrode and microelectrode?
   (b) Give two applications of above two electrodes. [10+6]
5. Write a note on "Physiotherapy instruments". [16]
6. What is all or none principle? Explain how action potentials are recorded. [16]
7. Discribe the origin for generating bio-electricity at the cellular and sub- cellular level. [16]
8. Explain the 10-20 electrode system used in the measurement of EEG. Plot the different brain waves and give its frequency and amplitude ranges. [16]

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Code No: 07A31102 **R07** **Set No. 1**

II B.Tech I Semester Examinations,MAY 2011
BIOELECTRICITY AND ELECTRODES
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Drawing their equivalent circuits, neatly explain the properties of needle electrode and microelectrode?
   (b) Give two applications of above two electrodes. [10+6]
2. (a) How are EPP and MEPP generated in skeletal muscle? Explain.
   (b) Discuss about electrical activity of skeletal muscles in detail? [8+8]
3. (a) What are precordial leads. Explain with neat circuit diagram.
   (b) Interpret the ECG as a case of Cardiac transmission waveform. [8+8]
4. What is the effect of Galavanism (constant current) on nerve or Muscle? Explain the term depolarization. [16]
5. Explain the 10-20 electrode system used in the measurement of EEG. Plot the different brain waves and give its frequency and amplitude ranges. [16]
6. Write a note on "Physiotherapy instruments". [16]
7. Discribe the origin for generating bio-electricity at the cellular and sub- cellular level. [16]
8. What is all or none principle? Explain how action potentials are recorded. [16]

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Code No: 07A31102 **R07** **Set No. 3**

II B.Tech I Semester Examinations,MAY 2011
BIOELECTRICITY AND ELECTRODES
Bio-Medical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What is all or none principle? Explain how action potentials are recorded. [16]
2. Discribe the origin for generating bio-electricity at the cellular and sub- cellular level. [16]
3. Write a note on "Physiotherapy instruments". [16]
4. (a) What are precordial leads. Explain with neat circuit diagram.
   (b) Interpret the ECG as a case of Cardiac transmission waveform. [8+8]
5. Explain the 10-20 electrode system used in the measurement of EEG. Plot the different brain waves and give its frequency and amplitude ranges. [16]
6. (a) Drawing their equivalent circuits, neatly explain the properties of needle electrode and microelectrode?
   (b) Give two applications of above two electrodes. [10+6]
7. What is the effect of Galavanism (constant current) on nerve or Muscle? Explain the term depolarization. [16]
8. (a) How are EPP and MEPP generated in skeletal muscle? Explain.
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