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

II B.Tech I Semester Examinations,November 2010
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 principle of Impedance Plethysmography? Give the relationship between Thoracic impedance and cardiac output with necessary explanation. [16]
2. Illustate the Physiological effects due to magnetic fields while recording bio-potents mention the safety codes for electro medica equipments. [16]
3. With the neat circuit diagram, explain the Electrode Electrolyte interface? What are different types of micro electrodes? [16]
4. What is depolarisation. Describe the nature of an impulse and add a note on strength and duration relationship. [16]
5. Write in detail about the Analytical instruments. Explain any 3 analytical instruments with neat sketch. [16]
6. (a) What do you mean by gradation of muscular activity? Explain.
   (b) What is chemical significance of fatigue. Explain. [8+8]
7. With the help of a neat sketch explain the electromechanical activity of a human heart. [16]
8. Describe various studies conducted on nerve conduction including Galvani and Volta's experimentation, Goldman's theory and Hodgekin and huxely's observation. [16]

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

II B.Tech I Semester Examinations,November 2010
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. Write in detail about the Analytical instruments. Explain any 3 analytical instruments with neat sketch. [16]
2. What is depolarisation. Describe the nature of an impulse and add a note on strength and duration relationship. [16]
3. With the help of a neat sketch explain the electromechanical activity of a human heart. [16]
4. (a) What do you mean by gradation of muscular activity? Explain.
   (b) What is chemical significance of fatigue. Explain. [8+8]
5. Illustate the Physiological effects due to magnetic fields while recording bio-potents mention the safety codes for electro medica equipments. [16]
6. With the neat circuit diagram, explain the Electrode Electrolyte interface? What are different types of micro electrodes? [16]
7. Describe various studies conducted on nerve conduction including Galvani and Volta's experimentation, Goldman's theory and Hodgekin and huxely's observation. [16]
8. What is the principle of Impedance Plethysmography? Give the relationship between Thoracic impedance and cardiac output with necessary explanation. [16]

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

II B.Tech I Semester Examinations,November 2010
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. Illustate the Physiological effects due to magnetic fields while recording bio-potents mention the safety codes for electro medica equipments. [16]
2. What is depolarisation. Describe the nature of an impulse and add a note on strength and duration relationship. [16]
3. Write in detail about the Analytical instruments. Explain any 3 analytical instruments with neat sketch. [16]
4. What is the principle of Impedance Plethysmography? Give the relationship between Thoracic impedance and cardiac output with necessary explanation. [16]
5. With the neat circuit diagram, explain the Electrode Electrolyte interface? What are different types of micro electrodes? [16]
6. (a) What do you mean by gradation of muscular activity? Explain.
   (b) What is chemical significance of fatigue. Explain. [8+8]
7. Describe various studies conducted on nerve conduction including Galvani and Volta's experimentation, Goldman's theory and Hodgekin and huxely's observation. [16]
8. With the help of a neat sketch explain the electromechanical activity of a human heart. [16]

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

II B.Tech I Semester Examinations,November 2010
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. Illustate the Physiological effects due to magnetic fields while recording bio-potents mention the safety codes for electro medica equipments. [16]
2. Describe various studies conducted on nerve conduction including Galvani and Volta's experimentation, Goldman's theory and Hodgekin and huxely's observation. [16]
3. Write in detail about the Analytical instruments. Explain any 3 analytical instruments with neat sketch. [16]
4. With the neat circuit diagram, explain the Electrode Electrolyte interface? What are different types of micro electrodes? [16]
5. What is the principle of Impedance Plethysmography? Give the relationship between Thoracic impedance and cardiac output with necessary explanation. [16]
6. With the help of a neat sketch explain the electromechanical activity of a human heart. [16]
7. What is depolarisation. Describe the nature of an impulse and add a note on strength and duration relationship. [16]
8. (a) What do you mean by gradation of muscular activity? Explain.
   (b) What is chemical significance of fatigue. Explain. [8+8]

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