

Code: EC7T4D

**IV B.Tech - I Semester – Regular / Supplementary Examinations  
November 2016**

**BIO-MEDICAL INSTRUMENTATION  
(ELECTRONICS & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Distinguish between action and resting potential in detail. 7 M  
  
b) Explain about different sources of bioelectric potential in detail. 7 M
2. a) Compare different biochemical transducers. 7 M  
  
b) Explain the role of piezo electric transducers in the bio-medical systems. 7 M
3. a) Compare ECG, EEG and ERG signals in detail. 7 M  
  
b) Explain the lead system used in the ECG. 7 M
4. a) Explain about the lung-volume measurement techniques. 7 M

- b) Explain about Plethysmography in detail. 7 M
5. a) Explain about the ultrasonography. 7 M
- b) Explain the working principle of computer tomography technique. 7 M
6. a) Explain the importance of lasers in medicine. 7 M
- b) Explain about Endoscopy in detail. 7 M
7. a) Explain the importance of Bio telemetry in detail. 7 M
- b) List out the uses of bio telemetry. 7 M
8. a) Compare cardiac pacemakers and defibrillators. 7 M
- b) Explain about artificial heart lung machine in detail. 7 M