

**Karunya University**  
**(Karunya Institute of Technology and Sciences)**  
(Declared as Deemed to be University under Sec.3 of the UGC Act, 1965)

**End Semester Examinations - 2015-16 Even Semester - May 2016**

## 15EI2002 Medical Electronics

## Set A

**Time : 3 hrs**  
**Total Marks: 100**

1. a. Explain the electrical activity associated with one contraction in a muscle. (8)  
b. Explain the formation of depletion region for a pn diode (12)  
**OR**
2. Explain how zener diode is used in voltage regulation both for varying input and varying load.
3. A. What is Laser? How is a Laser Diode constructed? (8)  
B. Briefly explain the operation and characteristics of photodiode and LED (12)  
**OR**
4. Explain rectification, types of rectification and rectifier applications
5. a. Explain how transistor is used in amplification. (12)  
b. Discuss Common base configuration of BJT (8)  
**OR**
6. Explain the input and output characteristics in common base configuration
7. a. Discuss three regions of operation of UJT (14)  
b. Write short notes on optocoupler used as isolator (6)  
**OR**
8. Describe the three regions of operation of a UJT with neat diagrams
9. Write short notes on  
a. Power MOSFETs (10)  
b. MOSFETs as charge transferring device (10)

**Wishing you All the Best**