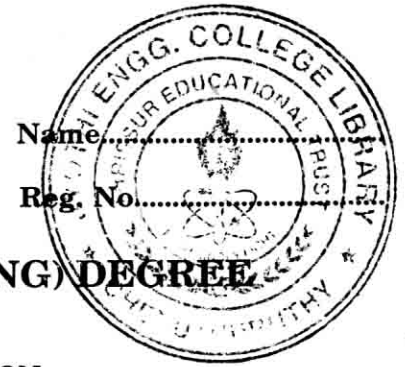


C 28740



Name

Reg. No.

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2012**

AI 04 603 – BIOMEDICAL INSTRUMENTATION

Time : Three Hours

Maximum : 100 Marks

1. (a) Explain the principle of LVDT with a neat diagram.
(b) What are the advantages of Thermistor over thermocouple?
(c) Write a short note on capacitance plethysmographs.
(d) What are the various effects and artefacts of ECG recording?
(e) Write a short note on pneumography.
(f) What is neuronal communication?
(g) Write the properties of X-rays.
(h) Define Fluoroscopy and Endoscopy.

(8 × 5 = 40 marks)

2. (a) Briefly explain about skin surface electrodes and the method of measuring the skin contact impedance.

Or

- (b) Explain in detail about the transducers available to measure the body temperature.

3. (a) Explain the operation of ECG machine with a neat block diagram.

Or

- (b) What are the direct methods available for measuring the blood pressure? Explain each.

4. (a) Explain briefly the anatomy of nervous systems.

Or

- (b) With a neat block diagram, explain the various components and operation of Electroencephalography.

5. (a) Explain in detail the principle of Magnetic Resonance Imaging with a neat diagram.

Or

- (b) What are the effects of electric currents in human body? Explain about the various electrical shock hazards.

(4 × 15 = 60 marks)