C 5270

Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2010

EE 04 805 (C) – BIOMEDICAL INSTRUMENTATION

Time : Three Hours | Maximum : 100 Marks

Answer **all** *questions.*

I. (a) Explain the principle of Microelectrodes.

(b) Explain the principle of any *one* Biochemical Transducer.

(c) Explain the oscillometric method of blood pressure Measurement.

(d) What is Einthovan's triangle?

(e) Explain the principle of body plethysmography.

(f) Discuss the principle of external pacemaker.

(g) Explain the principle of MRI.

(h) Write a note on Telemedicine.

(8 × 5 = 40 marks)

II. (a) Give the generalized block diagram of a Biomedical Instrumentation system. Discuss the various consideration in man-machine interfacing.

Or

(b) What is bioelectric potential? Mention its sources and relevance of each.

III. (a) With diagrams, explain the principle of phonocardiography.

Or

(b) Explain the principle of impedance and photometric plethysmographs?

IV. (a) What is heart lung machine? How it works? Mention the applications.

Or

(b) Explain the principle of EEG measurement.

V. (a) Explain the principle of electromyogram.

Or

(b) Explain endoscopy and diathermy.

(4 × 15 = 60 marks)

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