

C 58249

(Pages 2)

Name

Reg. No.

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2009**

EC 2K 406—ELECTRONIC INSTRUMENTATION

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

- I. (a) Differentiate between accuracy and precision.
(b) Compare digital and analog multimeters.
(c) Define and explain gauge factor of a strain gauge. What is its relevance ?
(d) Explain the principles of thermocouples and thermopiles.
(e) Define Q of a coil. Mention its relevance.
(f) How DSO stores information ?
(g) Explain one scheme for time period measurement.
(h) What is logic analyzer ? Where they are used ?

(8 × 5 = 40 marks)

- II. (a) Explain the principle of voltage and current measurement in analog electronic meter.

Or

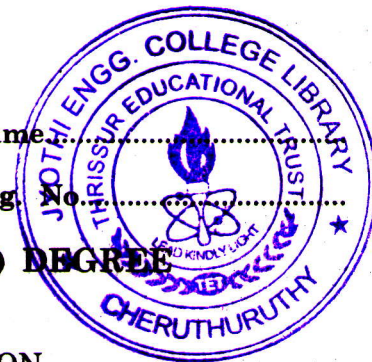
- (b) What are the various types of errors in measurement ? How statistical analysis is done on errors ?

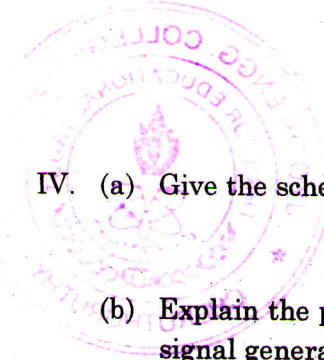
- III. (a) What is transducer ? How transducers are classified ? Explain with examples for each category. Explain the scheme for amplifying the weak transducer output.

Or

- (b) With diagram, explain one scheme for pressure measurement and one for flow measurement.

Turn over





IV. (a) Give the schematic of LCR meter and explain the principle of measuring each of these.

Or

(b) Explain the principle and role of signal generator. Also discuss the principle of synthesized signal generators.

V. (a) With block schematic, explain microprocessor based temperature sensing and control system.

Or

(b) With block diagram, explain the principle of digital data acquisition system.

(4 × 15 = 60 marks)