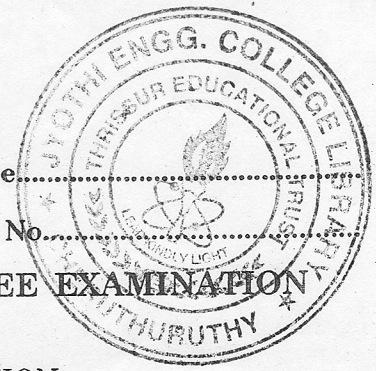


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Name.....

Reg. No.....

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2010**



EC 04 505—ELECTRONIC INSTRUMENTATION

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

1. (a) Define the terms : accuracy, resolution, precision.
(b) Classify errors. Explain them.
(c) Compare the performance of transistor and FET based measuring devices.
(d) Write notes on multimeter probes.
(e) Write notes on XY recorders.
(f) Explain any *one* method of measuring capacitance.
(g) Write notes on the applications of spectrum analyser.
(h) Explain the working of true RMS meter.

(8 × 5 = 40 marks)

2. (a) Explain the purpose and working of various strain gauges.

Or

- (b) Explain the working of :
 - (i) Potentiometer.
 - (ii) Piezo electric sensing elements.

3. (a) Explain the working of FET based multimeter.

Or

- (b) (i) Explain the working of Digital Voltmeter. (12 marks)
(ii) Compare the performance of analog and digital measuring devices. (3 marks)

4. (a) (i) Explain a bridge method to measure resistance.
(ii) Write notes on strip chart.

Or

- (b) (i) Explain the working of sweep frequency generator.
(ii) Write notes on digital waveform recorders.

5. (a) Explain the working of :
 - (i) Distortion meter.
 - (ii) Peak response voltmeter.

Or

- (b) Explain the principle of measurement using storage oscilloscopes. Also explain the various controls available in it.

[4 × 15 = 60 marks]