C 37066 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
JUNE 2004

EC.2K.406—ELECTRONIC INSTRUMENTATION

(New Scheme)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

I. (a) Define Linearity of an instrument. How is it improved ?

(b) Discuss the principle of digital multimeter.

(c) What is the principle behind piezoelectricity ? Explain.

(d) How is flow measurement made using magnetic method ?

(e) Describe the differences between the analog and digital IC testers.

(f) How is power measured ?

(g) What are the applications of digital interval counters ?

(h) How is temperature controlled using feedback technique ?

(8 × 5 = 40 marks)

II. (a) Discuss, in detail, about the probability of errors.

Or

(b) What are the various parameters considered while choosing an analog voltmeter ? Briefly explain the different choices.

(15 marks)

III. (a) Explain *one* method each for the measurement of :

(i) Low pressure ; and

(ii) High pressure.

(7 + 8 = 15 marks)

Or

(b) What are the characteristics of thermistors ? Explain the different types available.

(12 marks)

Explain its use in measurements. (3 marks)

Turn over

IV. (a) With the help of the block diagram, explain the operation of synthesized signal generator. (15 marks)

Or

(b) How can the measurement of values of the passive components made electronically ? Explain with a neat circuit diagram. (15 marks)

V. (a) Explain the automatic control of a low and high temperature using microprocessor. (15 marks)

Or

(b) With the help of block diagram, explain the application of logic analyser. (15 marks)

[4 × 15 = 60 marks]