



FOURTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY

ELECTRONICS INSTRUMENTS AND MEASUREMENTS

MODEL QUESTION PAPER

(Time:3 hours)

(Maximum marks: 100)

PART- A

Marks

I. Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Define instrument accuracy.
2. Identify any two probes used in CRO.
3. State the function of sensor.
4. List any two applications of logic analyzer.
5. State the condition for balancing a Wheatstone bridge. (5X2=10)

PART-B

II. Answer any five of the following questions. Each question carries 6 marks.

1. Illustrate the DC voltage measurement using multimeter.
2. Explain electrostatic focusing system of CRO with a neat sketch.
3. Explain the method of measuring resistance by Wheatstone bridge..
4. Differentiate between Moving coil and Moving iron instrument.
5. State the differences between active and passive transducer.
6. Explain open loop and closed loop control system.
7. Draw the block diagram of potentiometric type recorder. (5X6=30)

PART-C

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT-I

- III. a. Illustrate the working principle of a permanent magnet moving coil galvanometer. 8
b. Differentiate between 4 1/2. And 3 1/2 digit display systems in multimeter. 7

OR

- IV. a. Illustrate the working of a digital frequency meter. 8
b. Explain how a galvanometer can be converted in to a multirange ammeter. 7

UNIT-II

- V. a. illustrate the working of dual beam CRO. 8
b. Describe the measurement of voltage and frequency using CRO. 7

OR

- VI. a. Illustrate the working of LVDT. 8
b. List any six applications of CRO. 7



- VII. a. Explain inductance measurement method by using Hay's bridge. 8
b. Draw the block diagram of spectrum analyser. 7

OR

- VIII. a. Illustrate the working of Q meter. 8
b. Explain capacitance measurement method by using Schering's bridge. 7

UNIT-IV

- IX. a. Explain the working of strip chart recorder with the help of block diagram. 8
b. Explain the block diagram of analog Data Acquisition system. 7

OR

- X. a. Illustrate the working of X-Y recorder. 8
b. Describe the importance of telemetry in instrumentation system. 7

