

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) How does a digital multimeter measure fundamental electrical quantities ? Explain with the help of a block diagram. 9
- (b) Compare moving coil and moving iron instruments. 6

OR

- IV (a) Explain the operation of digital frequency meter with a neat diagram. Also explain a method for extending its range. 9
- (b) Explain how resistances are measured by an analog multimeter. 6

UNIT — II

- V (a) Explain the working of a DSO with the help of a neat block diagram. 9
- (b) What is thermocouple ? Explain its principle. 6

OR

- VI (a) Draw the internal structure of a Cathode Ray Tube and explain its Constructional details. 9
- (b) How is a thermistor used for accurate measurement of temperature ? 6

UNIT — III

- VII (a) Draw the block diagram of logic analyser. Explain why logic state analyser is better suited for designing digital system than oscilloscopes. 9
- (b) List the applications of Spectrum analyser. 6

OR

- VIII (a) Derive the mathematical expression for finding an unknown inductance, using Hay's bridge. 9
- (b) Describe the principle of measuring frequency using Wien bridge. 6

UNIT — IV

- IX (a) How does a strip chart recorder record the measured variable ? Explain with the support of a neat diagram. 9
- (b) How does a closed loop control system differ from an open loop control system ? 6

OR

- X (a) Draw the block diagram and explain the operation of a Digital Data Acquisition System. 10
- (b) Draw the block diagram of potentiometric type recorder. 5