General Instructions :-

01. All the questions are compulsory. There are 34 questions in all.
02. The question paper has four sections i.e. Section A, B, C & D.
03. Section A contains 15 questions of one mark each
04. Section B contains 08 questions of two marks each.
05. Section C contains 08 questions of three marks each.
06. Section D contains 03 questions of five marks each.

Section A (One mark each)

01. A C.R.O is used to measure :-
   a) Voltage   b) Frequency   c) Phase   d) All of these
02. Strain gauge is basically a device for measuring :-
   a) Electrical resistance   b) Mechanical Surface strain
   c) Force   d) None of these
03. The input resistance of a C.R.O is of order of:-
   a) Tens of ohms   b) Mega ohm   c) Fraction of Ohm   d) Kilo Ohm
04. Error due to unknown reason is
   a) Instrumental error   b) Random error
   c) Percentage error   d) Gross error.
05. More Power efficiency is achieved with :-
   a) Amplitude modulation   b) Frequency modulation
   c) double side band modulation   d) None of these.
06. Decimal value of binary 1110 is
   a) 10   b) 11   c) 12   d) 14
07. Define audio wave.
08. Give use of parity bit
09. Define BUS
10. Define Band width.
11. Define Base Band.
12. Write an application of Satellite Communication
13. The voice frequency range is 300-3000 HZ( True / False)
14. LVDT is Called _________ Transducer.
15. Hard Disk drive is a ______________ memory.

Section B (Two marks each)
17. Define Sensitivity.
18. Draw Block diagram of CRO
19. Define LVDT
20. Write two advantages of Strain Gauge.
21. What is Encoder.
22. What is an output device?. Give Examples.
23. Define Modulation Index (MI)

**Section C (Three marks each)**

24. Briefly explain types of errors.
25. Explain wireless Communication.
26. Write logic Circuit and truth table of AND gate.
27. Explain De Morgan’s Laws.
29. Define a) RAM  b) PROM  c) ROM
30. Explain Analog and digital transducers.
31. Explain Working of CRO.

**Section D (Five marks each)**

32. Explain Ex-OR gate with logic circuit and truth table.

   OR

Define Binary number system and convert the binary number 1101.0110 to its equivalent decimal number.

33. Define and derive expression for amplitude modulation wave.

   OR

Define modulation? What is need for modulation. Explain frequency modulation

34. What is De multiplex? Explain with the help of diagram.

   OR

Define and explain full adder.