Class: - 12th
Time: - 3 Hours

Subject: - Electronics
Max. Marks: - 70

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 0one marks each
04. Section B contains 08 questions of two marks each.
05. Section C contains 08questions 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)

16. *Define Accuracy.*
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.*
28. *Give truth table and Logic circuit of Half subtractor.*
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.