Code : R7100207

R7

Time: 3 hours   Max Marks: 80

Answer any FIVE Questions
All questions carry equal marks
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1. What are the front panel controls of CRO? Explalin.

2. Explain in detail about the capacitance effect of PN junction diode reverse biased condition also derive the expression for that capacitance.

3. Explain the construction & Working principle of LCD.

4. (a) Explain the construction & Working principle of varactor diode.

   (b) Write any four applications varactor diode.

5. n electron moving with initial velocity of 10^6 m/s enters an uniform magnetic field at an angle of 30° with it. Calculate the magnetic flux density required in order that the radius of helical path be 1 m. Also, calculate the time taken by the electron for one revolution and the pitch of the helix.

6. Write a short notes on:

   (a) Field intensity

   (b) Potential

   (c) Energy

   (d) Force in magnetic field

   (e) Force in electric Field

   (f) Coulomb's Law.

7. Explain the working principle of transistor pierce crystal oscillator and parallel resonant crystal oscillator.

8. Derive the expression for the frequency of oscillations and minimum gain for sustained oscillations of RC phase shift oscillator using FET.

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