

1. Why are vertical and horizontal plates provided in CRO?

These plates are thus referred to as the horizontal and vertical deflection plates. The combination of these two deflections **allows the beam to reach any portion of the fluorescent screen**. Wherever the electron beam hits the screen, the phosphor is excited and light is emitted from that point

2. What does the triggering circuit do in CRO?

An oscilloscope's trigger function is important to achieve clear signal characterization, as it **synchronizes the horizontal sweep of the oscilloscope to the proper point of the signal**. The trigger control enables users to stabilize repetitive waveforms as well as capture single-shot waveforms.

3. What is an essential component in CRT?

The CRT consists of three main components: **the electron gun, the electron beam deflector, and the screen and phosphors**.

4. What is an electron gun and what is the purpose of an electron gun assembly in CRT?

The idea behind an electron gun is **to create electrons and then accelerate them to a very high speed**. In a cathode ray tube (CRT) -- the big glass tube used in most televisions and computer monitors -- the electrons get aimed at the screen, where they light up the phosphor on the screen to create the image.

5. What is the purpose of a grid with a hole in CRO?

The hole in a grid of a CRO is provided to **allow passage for electrons through it and concentrate the beam of electrons along the axis of the tube**.

6. What is meant by deflection sensitivity of a CRO?

The deflection sensitivity of a CRO is defined as **the vertical deflection of the beam on the screen per unit deflecting voltage**. It is also defined as the deflection produced per volt of deflecting voltage. Therefore, the units of deflection sensitivity of the CRO is - meter per volt ( $m \cdot V^{-1}$ )

7. What is meant by deflection factor in a CRO?

The deflection factor of a CRO is **the reciprocal of the deflection sensitivity**.

8. What is astigmatism control in CRO?

Astigmatism. This is an **additional focusing control** and is analogous to astigmatism in optical lenses. A beam that is focused at the centre of the screen would be defocused at the edges of the screen because the lengths of the electron paths are different for the centre and the edges.

9. What is a graticule in CRO?

A graticule is **the grid on the display screen of an oscilloscope** that comprises the horizontal and vertical axes. The graticule is used to visually measure waveform parameters.

10. What is a Lissajous pattern?

**Lissajous figure**, also called BOWDITCH CURVE, pattern produced by the intersection of two sinusoidal curves the axes of which are at right angles to each other.

11. what does cro measure?

The CRO is used to measure the **voltage, current, frequency, inductance, admittance, resistance, and power factor**.

12. what is relation for period of waveform?

The period of a wave,  $T$ , is the amount of time it takes a wave to vibrate one full cycle. These two terms are inversely proportional to each other:  **$f = 1/T$  and  $T = 1/f$** . For example, if a wave takes 1 second to oscillate up and down, the period of the wave is 1 second.

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