

Name: \_\_\_\_\_

## **Questions about Cathode Ray Tubes and Oscilloscopes**

1. Why must a c.r.t. have a filament ?

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2. What does the anode do ?

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3. The material on the screen is said to be “fluorescent”. What does this mean ?

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4. A person is using an oscilloscope. The controls have been set to produce a small spot in the centre of the screen. What will happen if

a) a supply of direct current is connected to the Y plates ?

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b) a supply of d.c. of higher voltage is connected to the Y plates ?

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c) a supply of alternating current is connected to the Y plates ?

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d) a supply of a.c. is connected to the X plates ?

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5. What is an oscilloscope used for ?

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6. Try to find *two* ways in which a T.V. c.r.t. differs from the one in an oscilloscope.

i) \_\_\_\_\_

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ii)

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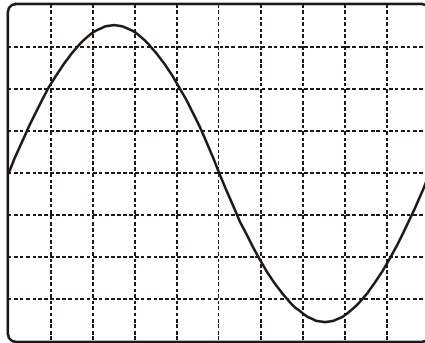
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7. The diagram below shows the screen of an oscilloscope. A supply of alternating voltage is connected to the oscilloscope.

The lines on the screen are 1cm apart (horizontally and vertically).

The vertically sensitivity is set to 5 V per cm

The time base is set to 10 ms per cm



- a) Calculate the frequency of the supply.

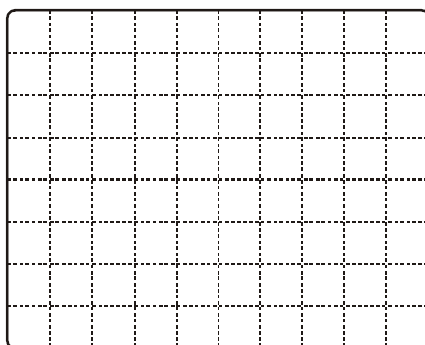
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- b) A supply of *half* the voltage and *half* the frequency is now connected to the same oscilloscope. The controls of the oscilloscope are *not changed*. On the next diagram, draw the shape of the curve which would be seen on the screen.



8. An oscilloscope is basically a voltmeter. In what way is it better than a "normal" voltmeter?

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