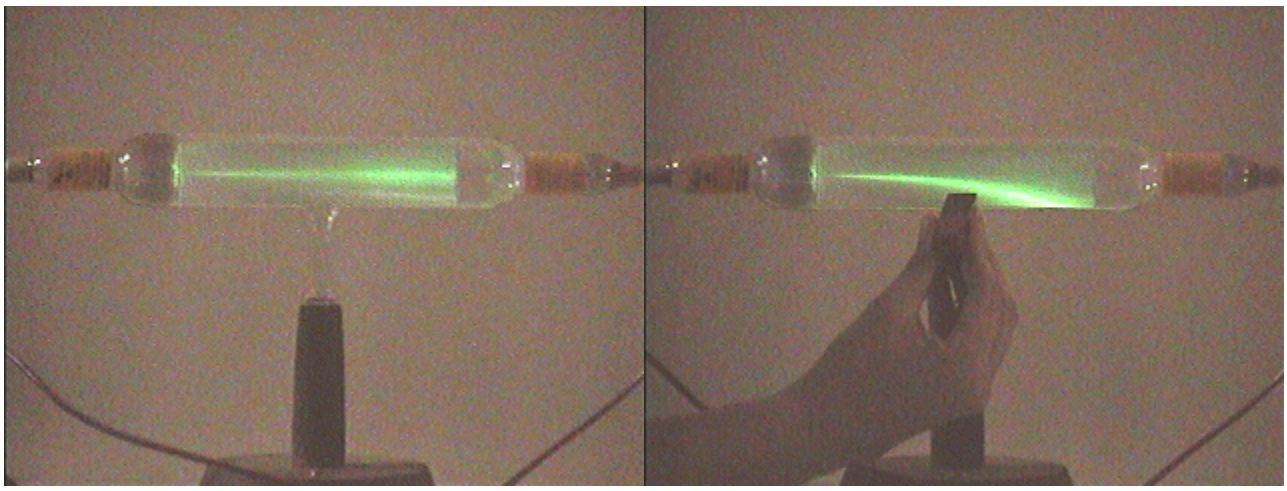
Answer #58

The answer is (b): the electrom beam will deflect *downward*, as seen in the picture at the right below.



To determine the direction in which the electron beam is deflected, you can use your left hand as follows: Point your fingers in the direction that the electron beam is initially proceeding (left to right). Then rotate your hand to curl your fingers toward the direction that the magnetic field is pointed (into the picture). Your extended thumb is now pointed in the direction toward which the Lorentz or **vxB** force is pointed - the direction in which the electron beam will be deflected. This is known as the left hand rule. If you use the (perhaps) more traditional "positive current" as your standard, you would substitute your right hand.

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given on the Lecture-Demonstration Home Page.