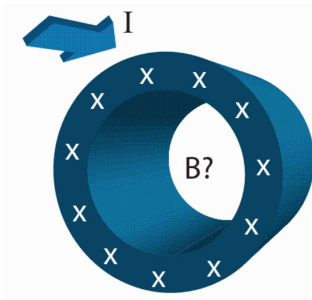


- (1<sup>st</sup>) 1. The figure below shows a hollow conducting pipe carrying a current  $I$  directed into the page. What is the direction of the magnetic field inside the hollow bore of the pipe?
- (a) clockwise
  - (b) counterclockwise
  - (c) radially inwards towards the central axis of the pipe
  - (d) radially outwards away from the central axis of the pipe
  - (e)  $B = 0$



- (1<sup>st</sup>) 2. The figure below shows the cross-section of a solenoid. The solenoid carries current  $I$  in its windings. The current is directed into the page at the top of the solenoid cross-section and it is out of the page at the bottom of the cross-section. What is the direction of the magnetic field inside the bore of the solenoid?
- (a) to the left
  - (b) to the right
  - (c) into the page
  - (d) out of the page
  - (e)  $B = 0$  inside the solenoid bore

