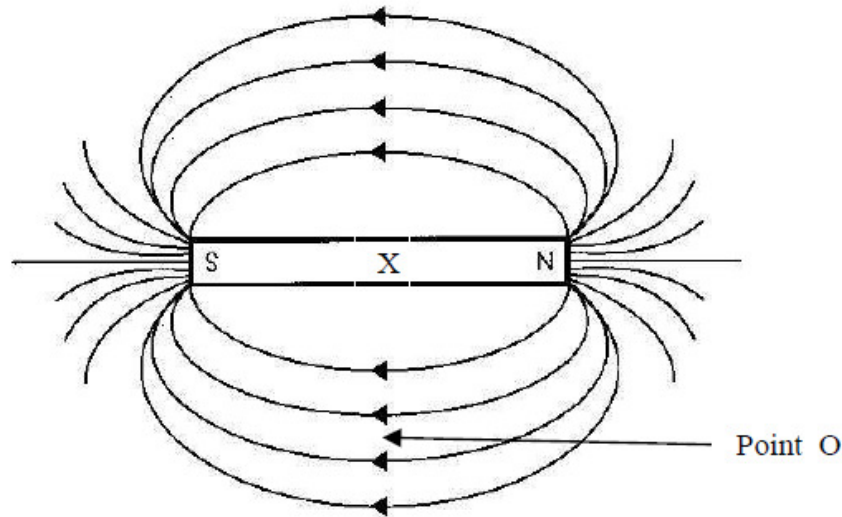


AS-2009 Q7 & Q8

7. A dipole bar magnet is shown in the diagram below, along with the pattern of field lines around it. A small steel ball bearing is placed at point O shown. What force would act upon the ball bearing?



- A The ball bearing is in equilibrium and has no resultant force
- B The resultant force is along the field line, from north to south
- C The resultant force acts towards the centre point X of the bar magnet
- D The resultant force acts away from the centre point X of the magnet
8. An electric current flowing through a wire produces a magnetic field around the wire. Four wires carrying identical currents are shown placed at the corners of a square. The symbol \otimes indicates a current flowing along the wire into the page, and the symbol \odot indicates a current flowing along the wire pointing out of the page. In which of the diagrams is the magnetic field at the centre of the square greatest?

