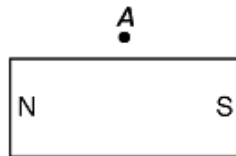


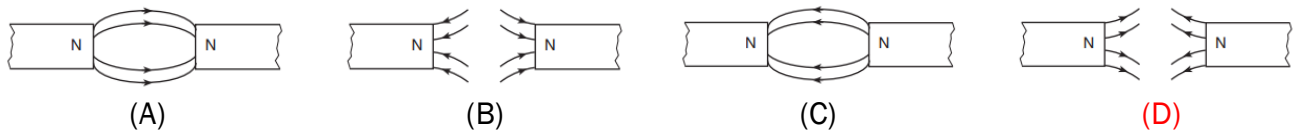
### Regents Magnetic Fields

**Directions:** Read textbook page 766 – 775.

1. The diagram below shows a bar magnet. Which arrow best represents the direction of the needle of a compass placed at point A?



2. In order to produce a magnetic field, an electric charge must be  
 (A) negative                      (B) positive                      (C) stationary                      **(D) moving**
3. A magnetic field would be produced by a beam of  
 (A) x rays                      **(B) protons**                      (C) gamma rays                      (D) neutrons
4. An electron moving at constant speed produces  
 (A) a magnetic field only  
 (B) an electric field, only  
**(C) both a magnetic and an electric field**  
 (D) neither a magnetic nor an electric field
5. Which diagram represents magnetic field lines between two north magnetic poles?

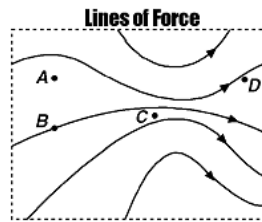


6. The diagram below shows the magnetic field lines between two magnetic poles, A and B. Which statement describes the polarity of magnetic poles A and B?



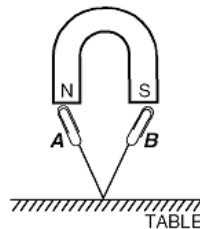
- (A) **A is a north pole and B is a south pole.**  
 (B) A is a south pole and B is a north pole.  
 (C) Both A and B are north poles.  
 (D) Both A and B are south poles.

7. The diagram below represents magnetic lines of force within a region of space.

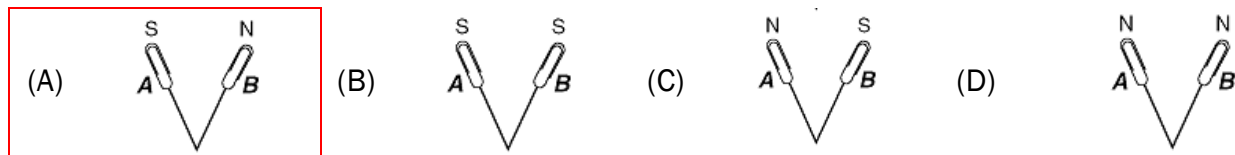


The magnetic field is strongest at point

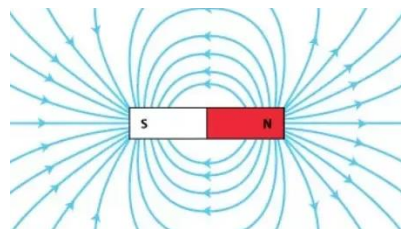
- (A) A                      (B) B                      (C) C                      (D) D
8. In the diagram below, steel paper clips A and B are attached to a string, which is attached to a table. The clips remain suspended beneath a magnet.



Which diagram best represents the induced polarity of the paper clips?



9. On the diagram below, sketch at least four magnetic field lines of force around a bar magnet. [Include arrows to show the direction of each field line.]



10. The diagram below shows the north pole of one bar magnet located near the south pole of another bar magnet. On the diagram, draw three magnetic field lines in the region between the magnets.

