36. Correct Answer : A

Answer Justification :

The motions of the liquid iron and nickel outer core of the earth are thought to create the earth's magnetic field. This magnetic field resembles a dipole as if a giant bar magnet was embedded inside.

S1 and 2: However, the axis of the dipole is not aligned with the rotational axis of the earth. Neither is it centered on the earth. The magnetic dipole axis of the earth is tilted about 11½° from the rotation axis.

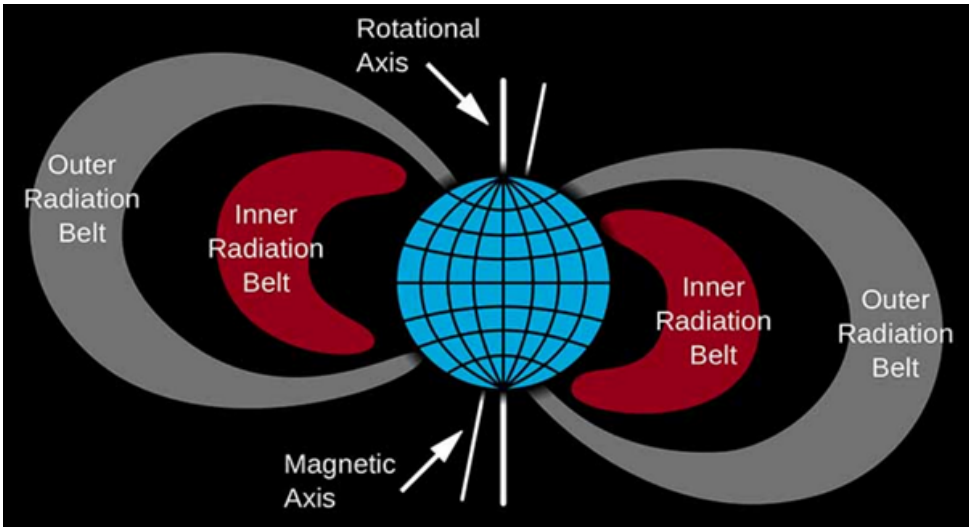
The magnetic poles of the earth are defined as the location of the strongest vertical magnetic field.

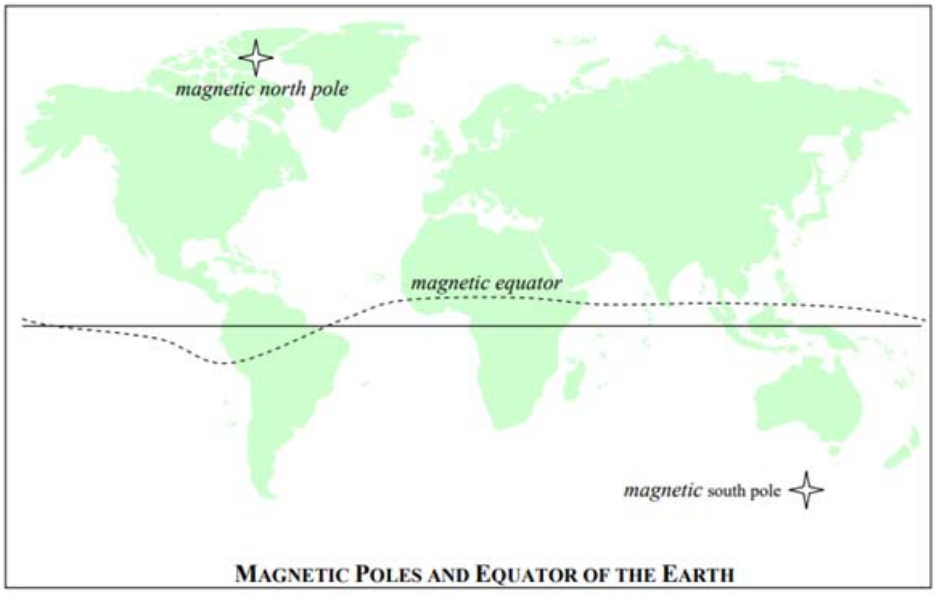
This places the magnetic north pole just west of northern Greenland (about N80° W70°) and the magnetic south pole near the coast of Antarctica south of Australia (about S75° E150°), as the following diagram shows.

The magnetic equator is defined as the line around the earth where the magnetic field is horizontal, or parallel to the earth's surface. It does not circle the earth as a smooth line like the geographic equator, but instead it meanders north and south, as shown.

Magnetic field lines of the earth enter the north geographic pole and exit the south geographic pole, as the following diagram indicates. So as the earth turns, its magnetic dipole axis wobbles around the rotational axis.

The magnetic dipole of the earth is not centered on the earth's core, but instead is offset by about 700 kilometers towards the direction of southeastern Asia. This creates two features in the magnetic field at the earth's surface.





Q Source: AR: Chapter 1: Goh Cheng Leong - Certificate Physical and Human Geography