8.5 - Magnetic Field of the Earth

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- (1999) A flat coil of 100 turns and mean radius 5.0 cm is tying on a horizontal surface and is turned over in 0.20 sec. against the vertical component of the Earth's magnetic field. Calculate the average e.m.f. induced.
- (2007) Write short notes on the following terms in relation to changes in the Earth's magnetic field: long-term (secular) changes, short-period (regular) changes and short-term (irregular) changes.
- (2013) An aircraft is flying horizontally at 200 m/s through the region where the vertical component of the earth magnetic field is 4.0×10^{-5} T. If the air craft has a wing span of 40 m, what will be the potential difference (p.d.) produced between the wing tips?
- (2015) List down three sources of earth's magnetism.
- (2016) State any three magnetic components of the earths magnetic field.
- (2016) The horizontal and vertical components of the Earths magnetic field at a certain location are 2.7×10^{-5} T and 2.0×10^{-5} T respectively. Determine the Earths magnetic field at the location and its angle of inclination i.