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Registration No.

VISIONIAS

Assignment Code

Classroom Assignment Sheet

6 2 4 5 7

Name:

Subject: Geography Batch: KB-20 Submission Date: 27-06-23 Marks:

Please mention Reg. No. and Assignment code of respective class. Use single assignment sheet (i.e. 2 pages) for 1 question. Limit your answers to 150 - 170 words.

Q. What do you understand by Geomagnetism? What causes this phenomenon? (150 words)

Geomagnetism is the magnetic field associated with Earth. Earth has outer rocky mantle below which lies liquid outer core surrounding solid inner core. This liquid nature of outer core and also the presence of charges (Fe) generates the magnetic field.

Causes of this Phenomenon

Rotation of Earth

Convection current
in Core

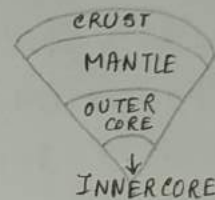


Fig: Earth's Interior



Fig: Earth's Magnetic field

i) Rotation of Earth: Causes the motion of charged particles in the outer core.

ii) Convection Currents: Heat rising from the inner core results in convection currents generation of molten material in the outer core.

• Also influences the direction of magnetic field

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How?

The motion of the charged particles in the molten material produces electric current through the earth's outer core. These currents result in magnetic field around earth through Electro-magnetism.

Evidence:

The historical study of Earth's magnetism through rocks, called as palaeomagnetism, provides important data regarding the polarity of minerals Geomagnetism by the mineral alignment.

From the Sea floor spreading theory, Harry Hess recorded the constant movement and spreading of rocks on ~~the~~ ocean floor. These rocks have magnetism because as they cool down, magnetic minerals align with respect to the Earth's magnetic field.

[The magnetic poles have moved steadily over time (Polar wandering) and ^{the magnetic field} may get reversed ~~as well~~ due to reversal of convection currents in outer core. The magnetic field is important because it protects the earth against harmful radiations and also causes phenomenon like Aurora.