

CBSE Class – VII Social Science
NCERT Solutions
Geography Chapter 02
Inside Our Earth

Question 1. Answer the following questions:

- (i) What are the three layers of the earth?**
- (ii) What is a rock?**
- (iii) Name three types of rocks.**
- (iv) How are extrusive and intrusive rocks formed?**
- (v) What do you mean by a rock cycle?**
- (vi) What are the uses of rocks?**
- (vii) What are metamorphic rocks?**

Solution:

- (i) The three layers of the earth are the crust, the mantle and the core.
- (ii) A rock refers to any natural mass of mineral matter that makes up the earth's crust.
- (iii) Igneous, sedimentary and metamorphic rocks are three types of rocks.
- (iv) Both extrusive and intrusive rocks are examples of igneous rocks. Extrusive rocks are formed when the molten magma present inside the earth's interior comes out onto the earth's surface, cools down and becomes solid on the earth's crust. These rocks have very fine grained structure. For example, basalt. When molten magma cools down and solidifies deep within the earth's crust, intrusive rocks are formed. Since they cool down slowly, they form large grains. Granite is an example of such a rock.
- (v) The transformation of one type of rock into another, under certain conditions and in a cyclic manner is referred to as the rock cycle. For example, igneous rocks, formed as a result of the solidification of molten magma, may break down into small particles, which may then be transported and deposited to form sedimentary rocks. Sedimentary and igneous rocks transform into metamorphic rocks when subjected to heat and pressure. These metamorphic rocks may themselves get broken down to form sedimentary rocks, or they may melt under great heat and pressure to form molten magma, which would then once again solidify to form igneous rocks.

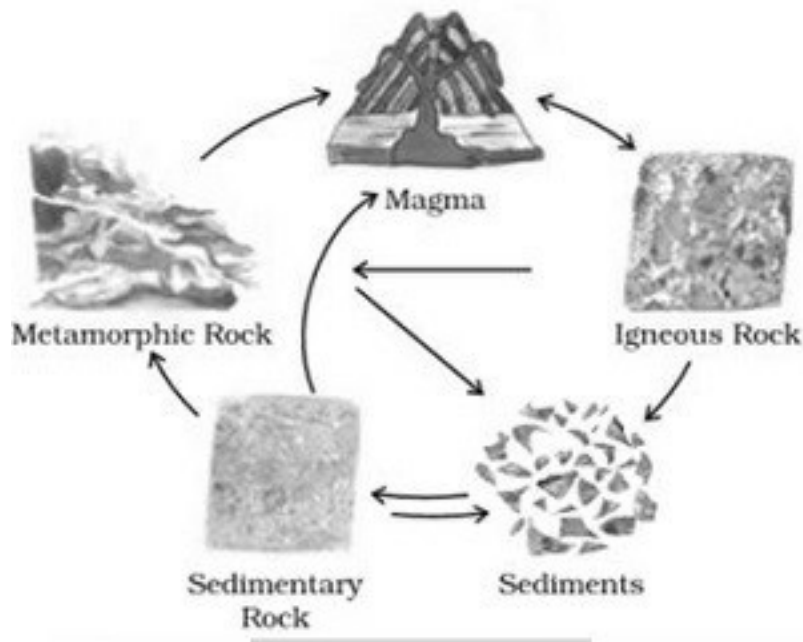


Fig. 2.4: Rock Cycle

- (vi) Some of the uses of rocks are as follows:
- For building roads, houses and constructing buildings For making jewellery
 - For cutting and drilling purposes
 - The fossilised remains of plants and animals present in rocks help in scientific research.
 - The different minerals that make up different rocks are used as fuels, medicines, fertilizers, and in various industries.
- (vii) Metamorphic rocks are the rocks that get formed under great heat and pressure. Igneous and sedimentary rocks, when subjected to heat and pressure, get transformed into metamorphic rocks. For example, clay changes to slate and limestone into marble.

Question 2. Tick the correct answer.

(i) The rock which is made up of molten magma is

- (a) Igneous (b) Sedimentary (c) Metamorphic

Solution:

- (a) Igneous

(ii) The innermost layer of the earth is

- (a) Crust (b) Core (c) Mantle

Solution:

- (b) Core

(iii) Gold, petroleum and coal are examples of

- (a) Rocks (b) Minerals (c) Fossils

Solution:

- (b) Minerals

(iv) Rocks which contain fossils are

- (a) Sedimentary rocks
- (b) Metamorphic rocks
- (c) Igneous rocks

Solution:

- (a) Sedimentary rocks

(v) The thinnest layer of the earth is

- (a) Crust (b) Mantle (c) Core

Solution:

- (a) Crust

Question 3. Match the following. Ans.

(i) Core	(e) Innermost layer
(ii) Minerals	(d) Has definite chemical composition
(iii) Rocks	(b) Used for roads and buildings
(iv) Clay	(a) Changes into slate
(v) Sial	(c) Made of silicon and alumina

Question 4. Give reasons.

(i) We cannot go to the centre of the earth.

Solution:

The center of the earth lying about 6000 kms from the ocean floor is characterized by extremely high temperature and pressure. There is only molten magma at earth's center. Oxygen is absent. Such conditions do not permit the survival of any living organism. Thus, we cannot go to the centre of the earth.

(ii) Sedimentary rocks are formed from sediments.

Solution:

When big rocks break down into small fragments (or sediments), the fragments are transported and deposited by factors like water and wind. The loose sediments compress and harden over the years to form layers of rocks. These rocks are known as sedimentary rocks.

(iii) Limestone is changed into marble.

Solution:

Limestone is an example of a sedimentary rock. When it is subjected to conditions of extreme heat and pressure, it gets converted into marble, which is a metamorphic rock.

Question 5. For fun.

(i) What are the minerals most commonly used in the following objects?



(ii) Identify some more objects made up of different minerals.

Solution:

(i)

Object	Minerals most commonly used in them
Karhai	Iron, copper, stainless steel
Ornaments	Gold, silver
Lamp	Brass, silver, gold
Hammer	Iron, steel, lead, brass
Bell	Brass, silver, gold
Pan/tava	Iron, steel, aluminium

(ii) Pencil lead is made of graphite. Telephones have copper wiring. Carpets in our homes contain sulphur and chromite. Clocks are made of Quartz and Pentlandite.