

Name	Imad Ahmad.
ID	16082
Section	"A"
paper	Engineering geology.
Submitted To	

(1)

Q.D.

Part (I)

Ans: Statement

	weathering (or) Erosion
⇒ Breakdown of rock without it being moved.	Weathering
⇒ Wearing away of rock during transport of rock particles	Erosion
⇒ A process caused by winds, running water and moving ice	Erosion
⇒ An effect of plant roots growing in rock joints and fractures.	Weathering

Part (II)

Ans: Carbon dioxide dissolves in rain forming very dilute carbonic acid. This is the reaction that turns the indicator yellow when you blow into water. The dilute carbonic acid then attacks limestone.

(2)

part (III)

Ans:

~~of~~ the large crystal formed in the rock when magma cool slowly. The underground rock which make from magma called intrusive igneous rock.

Unlike sedimentary rock, igneous rock donot contain any fossils.

This is because any fossils in the original rock will have melted when the magma formed.

Part (iv)

Ans:

Igneous rock contain only arranged interlocking crystals.

The size of the crystal depends on how quickly the molten

magma solidified magma that

cools slowly an igneous rock with large crystals have

that cools quickly will form igneous rock with small crystals.

(3)

part (v)

Ans: Sedimentary rock process that might be responsible for producing the large angular, poorly sorted fragments in the scree. Sediments collecting at the bottom of the cliff.

Q C

part (i)

Ans: Composite volcano.

part (ii)

Ans: part (a):

The composition of the gases in magma are:

(*) Mostly H_2O (water vapour) and some CO_2 .

(*) Minor amount of sulfur, chlorine & fluorine gases.

(4)

Part b:

Ans: I No increase in frequency and intensity of felt earthquakes.
*) Small changes in melt flow
Swelling of the ground & surface.

Part B

Ans: II Health concerns after a volcanic eruption include infectious disease, respiratory illness, burns; injuries from falls & vehicles accident related to the slippery, hazy condition caused by ash.

(5)

Q 1

Ans:- Part (a) The name given to this process is geological weathering.

Weathering is the breakdown of rocks at the Earth's surface by action of rainwater, extremes of temperature, and physical ~~way~~ activity.

Weathering is the wearing away of the surface of rocks, soil, and minerals into small pieces.

Example:

Wind and water causes small pieces of rocks to break off at the side of a mountain, ice wedging and plant roots etc.

Part b:

Ans: Sediments transport occurs in natural at system where the particles are elastic rocks (sand, gravels etc). The fluid

⑥

is air, water (or) ice and the force of gravity acts to move the particles along the sloping surface on which they are resting.

The prolonged transport of sediment by water and wind current effect the particles ways are

- 1) Reduction in particle size.
- 2) Rounding of original angular fragments.
- 3) The greater the difference of transport, the smaller and more rounded the grains.

Part C

Ans:

Sedimentary rock are formed when sediments is deposited out of water flows carrying the particles in suspension. The sediment is often formed when weathering & erosion break

(7)

down a rock into loose material in source area.

As the chemicals that come from the minerals (or biological precipitation mix with sediments.

~~latter~~ on the floor of the ~~oceans~~ ocean (or) lake they crystallize and grow in the spaces around

the sediment. ~~the~~ When these crystals grow large enough to fill the spaces they harden and form a solid rock. This process is called cementation.

These process eventually make a type of rock called sedimentary rock.

Part D

Ans:

Although metamorphic rocks ~~are~~ typically form deep in the planet's crust, Metamorphism occur because rocks undergo changes in temperature and pressure and may be subjected to different stress and hydrothermal fluids. Temperature increase with depth in earth along the Geothermal gradients

Thus higher temperature can occur by burial of rock.

Metamorphic rocks start off as igneous or sedimentary, (or) other metamorphic rocks. These rocks are changed when heat (or) pressure alters the existing rock's physical (or) chemical make up.

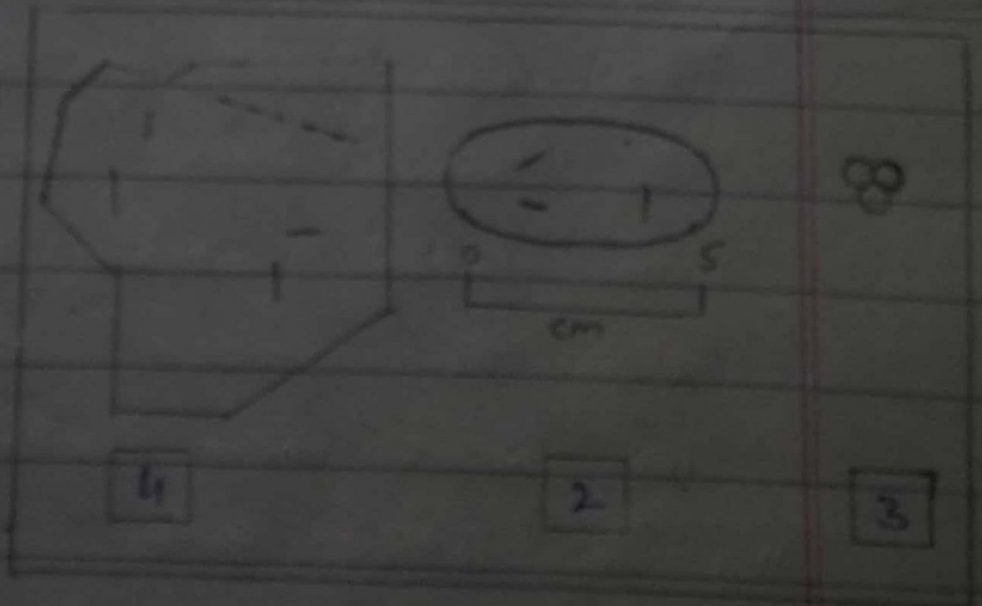
(9)

From point D metamorphic rock can change into igneous rock (a) Sedimentary rock. When hot liquid magma is cooled these minerals can form crystals. At the surface metamorphic rocks will be exposed to weathering processes and may break down into sedimentary rocks, which would start the entire cycle anew.

Q 2

Part (1)

- ① clay mud
- ② rounded pebbles and sand
- ③ sloping and layers
- ④ angular boulders



part (II).

Ans: Sediments are most often transported by water, but also wind and glaciers.

Beach sands deposits are caused by river transport and deposition.

Sediments also often settle out of slow-moving ^{low} standing water in lakes and oceans.

When sediments is transported and deposited. The mode of transport is by sliding down a slope. The deposits show the wide variety of particles size.

The changes occurs in sediments are during erosion process and also the process of deposition in which main factors are

- 1) The settling rate
- 2) The boundary layer shear stress.

(11)

Examples of Sediments are breccia, conglomerate, sandstone, and siltstone are mechanical weathering and rock salt, iron, ore, flint, and some lime stones, are form when dissolved materials participates from solution.