

# Geology

2<sup>nd</sup> Semester  
Afaq Hussain  
ID 16269 Sec "B"

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①

(A) Figure 1:-

(a) Rock is broken down by frost, rain and sun at A. What name is given to this process?

\* Sheets of rocks broken away from the rocks along with fractures the process is called exfoliation. Exfoliation is due to pressure releases due to the impact of weathering. These process are physical factors i.e. rain, sun are "physical weathering".

(b) The sediments grain transported in the form of sliding or rolling grains. Transport of sediment by water affect the particles in two ways.

- ① Reduction in particle size
- ② Become rounded from its original shape which is angular fragments.

\* The greater distance of transport the grains will

② become smaller and more rounded.

③ Sediment are come closer together by overlying under the water. This is called compaction. The sediment become elastic rock.

The fluid fill the spaces b/w the loose particle of sediment and crystallize to create rock by the process of cementation.

\* The collection of loose sediment into new form solid rock the process is called lithification. lithification is the combination of two processes compaction and cementation".

The loose particles are, "clay, sand, gravel" etc

④ Physical and chemical process and pressure causing the process called metamorphism. two changes happened which discussed below.

① contact metamorphism

② Regional metamorphism

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(a)

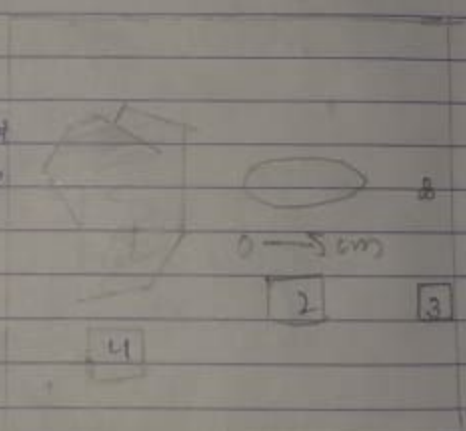
(i) The permanent change in the rock due to heat effect the property of rock called contact metamorphism.

(ii) Due to pressure the property of rock change called regional metamorphism.

B Figure (2) :-

(a) (i) :-

- (1) Clay mud
- (2) rounded pebbles 5 cm
- (3) Steeping sand 5 layers
- (4) Angular Boulders



(b)

(ii) :- Downstream collision with the rocks and other particles colliding with sediment particles which changes its shape from angular edges to rounded shape and decrease its size as far it's travelled in downstream.

(4)  
In downstream sediment particles flows and at the end these quite get small as result the sediment suspended in water.

### c Figure (3)

(i) Stratovolcanoes type of volcano will be produced if eruption is more often. Volcanic material expelled during an eruption immediately begins moving down the sides of volcano. The pyroclastic flow also form when lava flow become too steep and collapses.

(ii) When the boiling fragment of magma hit the colder air they freeze into individual dust particles and goes upward toward atmosphere due to high power and heat of eruption the process is called "Ash column".

(5)

(a) The sudden release of pressure causes gases in magma goes towards atmosphere and produce or create volcanic ash. Then ejected the volcanic ash and create the sign of eruption commonly called "Ash column". Which is associated with the explosive eruption.

(b) As volcano burst the fast moving lava can kill people and falling ash can make it hard to breathe.

(i) The gas will be leaks and shows like bubble burst from the volcano. The most common sign is the feel small range of earth quake.

(ii) As the volcano ash can make hurdles to breathe and Inhalation of volcanic ash is very harmful to human health. Effect livestock wind can carries thousand miles the "ash".

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⑥

① statement related to either weathering or erosion.

① Breakdown of rock without being moved is "weathering"

② Wearing away of rock during transport of rock particles "Erosion"

③ A process caused by wind, raining water and moving ice "Erosion".

④ An effect of plant roots growing in rock joints and fracture "Weathering"

④ Rain is naturally slightly acidic some rock like limestone are mostly calcium carbonate when rainwater falls on limestone a chemical reaction start these dissolve in water and then washed away while some rock like sandstone are not easily weathered by rain water.

(ii)

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Igneous rock form from molten rock that's why Igneous rock do not contain any fossils.

(iii)

Granite cools slowly because it is formed underground as a result of volcanic eruptions. It cools slowly because it's buried under earth due to which it takes long time to cool down as Basalt are rapidly cooled because it's nearer to earth due to which it cooled fast as compare to Granite.

(iv)

Hydraulic action is happen and it is type of "erosion" that occur when motion of water against the rock produces mechanical weathering these specific "erosion" process including "abrasion" "corrosion" the large piece of rock face detached from cliff this whole process happen due to "erosion"