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(1)

Q1 Figure 1 shows part of the earth's crust and the location where some rock cycle process take place.
(a) Rock is broken down by rain and sun at A. what name is given to this process.

Ans Rock is broken down by frost rain and sun this process is called mechanical weathering.

(b) How is sediment grains in a river changed during transport from A to B? state two differences in the likely appearance of the grains in the flow.

Ans It is change due to the flow of water it is also called sediment load.
1) Bed load particles travel with flow by sliding or bouncing along the bottom.

2) If the flow of water is strong enough to take the particles. it become part of suspend load.

(c) How do loose sediments at C become changed into solid rock?

(2)

Ans It is change due to a process called lithification it means stone it is a combination of two process.

1) compaction

2) Cimentation.

(D) Rocks that are deeply buried in Earth's crust may under go metamorphism. describe two changes that happen in rocks during metamorphism and explain point D.

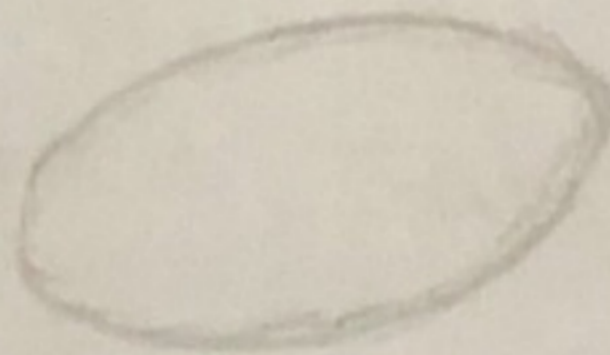
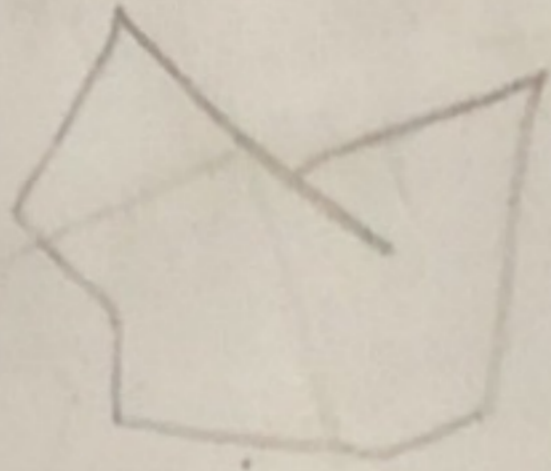
1) It is created by physical or chemical alteration by heat and pressure of an existing ~~idreous~~ ^{idreous} material into

2) or a sedimentary material into a denser form. In the point D the metamorphic rock changes again to magma and form ~~breaks~~ ^{breaks}.

B. Figure 2 below shows the size and shape of typical sediment particles from the ~~dysonit~~ ^{dysonit} produced.

(3)

1	clay mud
2	Rounded Pebbles and Sand
3	Sloping sand layers
4	Angular boulders.



4

2

1

(ii) In your words, explain how sediment particles change as they are transported down stream by a river?

Ans The sediment particles transported due to the flow of water. The particles slide or bounce along the bottom. Some are very small having (0.001 to 5 mm in diameter) so these molecules stay afloat and when the water flow is fast so it creates an upward current that makes these particles move faster and add faster.

C Figure 3

Show that the structure of a volcano and the back layers beneath.

(i) type of volcano is shown in the figure by shape and if eruption is more than which category it fits?

Ans It is a composite volcano and if eruption is more than it will consist to stratovolcano these both are same but it has a smoother lower profile than composite volcano.

(ii) The eruption shown in Figure 3 is producing an ash column that rises thousands of meters above the volcano summit.

(2) Explain how gases trapped in the magma help producing the ash column.

Ans It is produced due to volcanic eruption when dissolved gases in magma expand and escape violently in the atmosphere. The force of gases shatters the magma and propels it into the atmosphere.

(b) Many people around the world live close to volcanoes so, when a volcano erupts, thousands of live may be at risk.

(i) Suggest one sign that might indicate if a volcano is about to erupt.

Ans Rise of magma towards the surface which generates earth quake.

(b) Suggest two dangers that might result from ash fall from a volcano

(1) It can threaten the health of people and live stock.

(2) It can damage electronics and machinery and telecommunications.

(D) Answer the following question.

(i) In table below are statements that refer to either weathering or erosion complete table by writing weathering or erosion in the spaces provided.

Statement

1) Breakdown of rock ~~being~~ being \leftrightarrow weathering or erosion
removed. \leftrightarrow weathering

Statement

Weathering or Erosion

(2) wearing away of rock during transport of rock particles Erosion

(3) A process caused by wind, during water and moving ice Weathering

(4) An effect of plant roots growing in rock joints and fractures Erosion

(ii) A statue was made from limestone. Rain makes limestone weather more quickly than sandstone. In the rain water what substance cause this? Carbonic acid is the substance in the rain water.

(iii) why igneous rocks never contain fossils?

Ans Because Any fossil in the original magma will have melted when the magma formed.

(iv) Granite takes much longer to cool deep underground than basalt lava at the Earth's surface. How and why is the size of crystals in granite

(7)

different from the size of the crystal in basalt?

Ans

The difference is between silica content and their water. if magma cools quickly.

For example: when basalt lava erupts from volcano. then many crystals form very quickly and the resulting rock is fine-grained with crystals usually less than 1mm in size. Crystals have more time to grow large size.

(v)

Describe one process that must be responsible to producing the large, angular, poorly sorted fragment in the scree sediment collecting at the bottom of the cliff?

Ans

As a result of freeze-thaw ~~evaporation~~ water seeps into cracks in the rock, expanding when it freezes and seeping in deeper when it melts, gradually splitting the rock apart. Those fragments are removed by gravity and fall onto the scree slopes beneath.