

AFAQ AHMAD id 16669

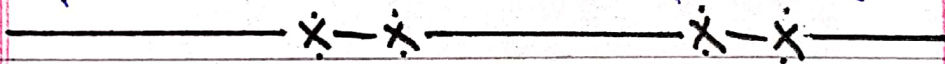
Assignment:- Engineering Geology  
Semester 2nd Section - B

BE (civil) Engineering -

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Date 15-4-2020

**A. Figure 1:-** Shows part of the earth's crust and the locations where some Rock cycle processes take place?



Ans:-

(a) At point "A":-

The soil and loose rock from the mountains erode due to rain fall and is called sedimentation.

(b) At point "A to B":-

The soil grains are eroded in the form

of Sediments or  
Silt and then these  
Sediments when found  
stable condition settle  
and work to form  
Sedimentary rocks -

c At point C:-

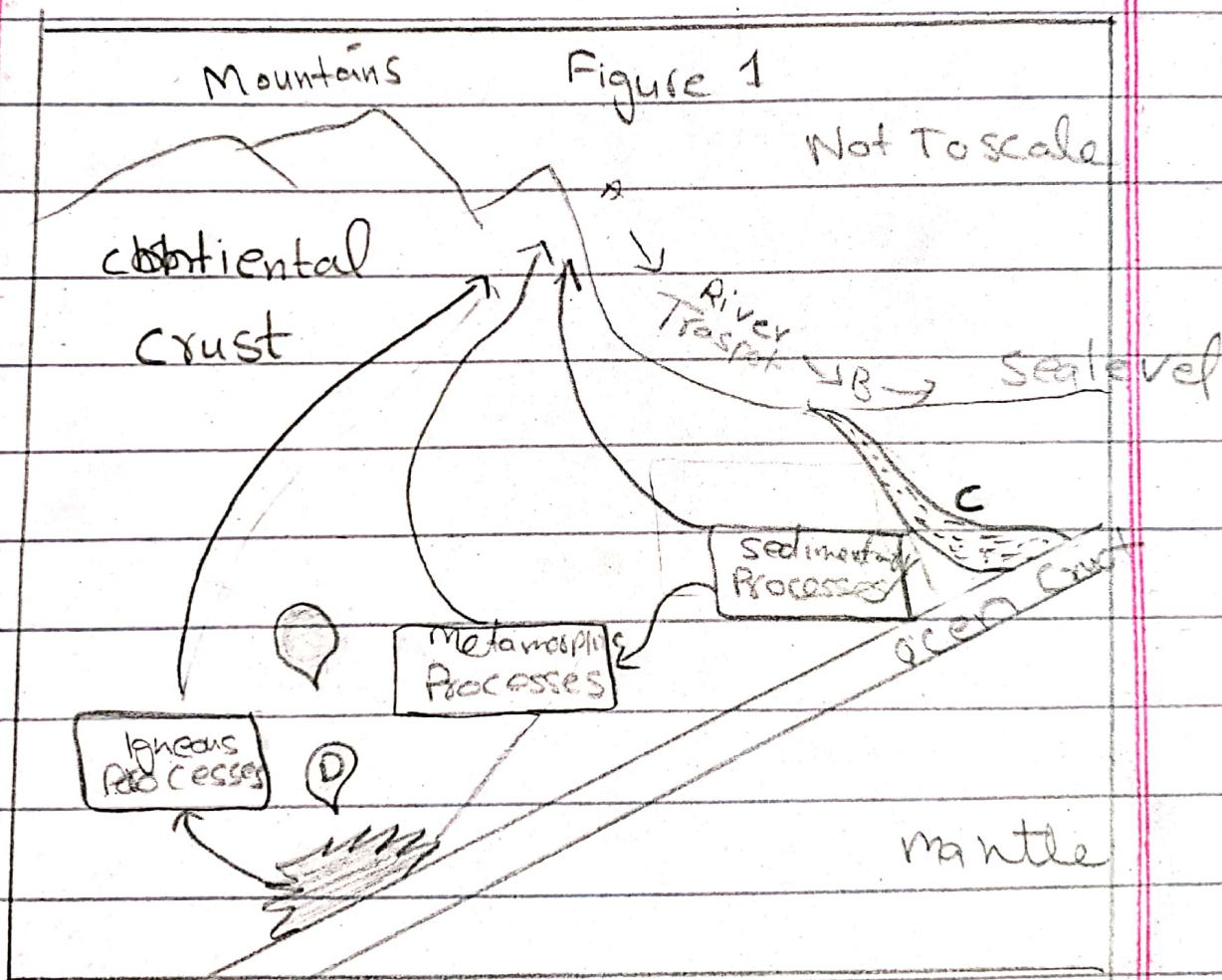
The  
Sedimentary rocks under  
high pressure and  
depth the rocks  
changed into Sedime-  
-ntary rocks. like Igneous  
rocks..

d At point D:-

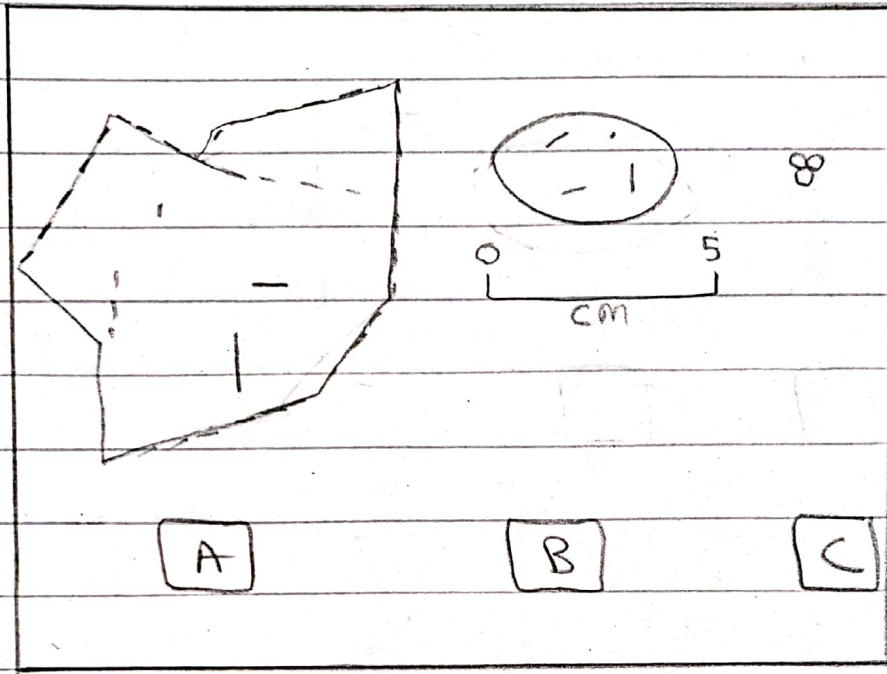
The rock  
(Sedimentary) under high  
pressure and temperature  
change into metamorphic  
rocks like gypsum  
and marble.

⇒ under high pressure  
the metamorphic rock change

into lava.



## B. Figure 2.:



(1): clay Mud:-

stocky po Clay name  
 stocky partial and are  
 rock in shape as  
 compare to other  $\Rightarrow$  in  
 micrometric.

(2): Round pebbles  
 and Sand:-

The round  
 pebbles are in  
 size of 1.5-2 inch.  
 and in elongated, sand ground  
 -axis

### 3 Clumping Sand layers:

The Sands having Clay in between as a moist condition slip upon each other due to loose cohesion between particles - due to loose cohesion between particles.

### 4 Angular Soulders:

in size 3-4" and is mainly tough rock and is angular, used in base or subbase for its good interlocking.

(a) Metamorphic rocks are tough and are marbles and gypsum rock size 3-4", angular is shape-

b elongated rounded shape, have less interlocking and is mainly found

in river banks, and  
is a major cause of  
water flow.

C Sediments, mainly as silt  
and clay and are  
granular, and surface-

C. Figure 3, ::

The structure of volcano is shown in the figure and hence will define, below:-

(i) The volcano shown in the figure is a type of composite volcano because have different layers and channel to much the volcano, if eruption is done then sudden eruption is done ~~then~~ happen in a high form so that case move dangers.

2 yes after eruption the Ash flow up in to the sky in thousands of kilometer a some in hot form.

of rock (hot and have many poisonous gases.

(a) Gases due to high temperature and pressure below found beneath produce gases like  $\text{CO}_2$  and  $\text{CO}$  and is giving very danger environment.

b The people live around the near domestic are it is dangerous because the lava is hot and may cause fire and the in halting poisonous gases cause may respiratory problems and thousands of lives care at rock.



(i) if a volcano is about to erupt then it at first cause earth quake in minor scale and the smoke about the volcano is thick and is dark so can imagine the situation of corruption.

(ii) The two dangers from volcano are as follow-

(1) As the domestic areas may be affected of the force, and burn.

(2) The people around the volcano are mainly affected from gas and the forests are destroyed.

D.: Answer the following questions?

(i)

	Statement	Weathering or Erosion
1	Breakdown of rock without it being moved	1 weathering
2	Wearing away of rock during transport of rock particles.	2 weathering
3	A process caused by wind, running water and moving ice.	3 erosion
4	An effect of plane rocks growing in rock joints and fractures.	4 weathering

(ii) Ans:- Almost all of statues are made up of limestone and the limestone may be highly effective to rain. Limestone are predominantly affected

by chemical weathering when rainwater, which contains a weak carbonic acid, reacts with limestone. This causes the limestone to dissolve. Evidence of chemical weathering can be seen in areas where limestone is exposed to the elements. Rainwater erodes the vertical joints and horizontal bedding planes in limestone.

(iii) Ans: - Igneous rocks don't have contain any amount of fossil because fossil is considered as type of metamorphic rocks in formation of igneous rock the all type of rock include fossils. So in igneous rock the doesn't present in original form. it's occur in molten form mixed with other rocks.

(iv) Ans:- Basalt is a volcanic or extrusive igneous rock, meaning it has cooled at or near the surface, resulting in rapid cooling and the formation of small crystals. Granite, on the other hand, is a plutonic or intrusive igneous rock, meaning it cooled at depth, much more slowly, resulting in the formation of larger crystals.

It's concluded that the size and shape of crystal depends upon on the rate of cooling of magma.

(v) There are different method of production of different size and shapes in scree. But here we are going to

discuss the "freezing thaw method"  
in this process water  
seeps into cracks in  
the rock, expanding when  
it freezes and seeping  
in deeper when it  
melts, gradually are  
removed by gravity and  
fall onto the scree  
slopes beneath.