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Q1

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

Ans The Rock is broken down by frost rain and Sun the process is called Physical / Mechanical weathering.

(b) How is Sediment is ~~than~~ grain in a River changed during transport from A to B (State two difference in the likely appearance of the grains?)

Ans Sediment grains in a River are changed by clay sand and slit and

by accumulation and deposition of small other particles and subsequent cementation of minerals or organic particles on the floors of river.

b) ⇒ the first difference in the likely appearance of the grains is "Size" they are different from each other on the basis of size

c) ⇒ the second difference in the likely appearance of the grains is its "texture" they are different from each other on the basis of "texture"

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

Ans Sediments are squeezed together by the weight of overlying sediment on top of them. Fluid fill in the spaces between the loose particles of sediment and crystallize to create a rock by cementation. Calcite and silica are common minerals the cement the sediment

together and form a solid rock.

(d) Rock that are deeply buried in the earth crust may undergo metamorphism. Describe two changes that happen in rocks during metamorphism and explain Point D?

Ans two changes that happen in rock during metamorphism.

(i) Intrusive Rock:

⇒ Intrusive Rock form from magma underground often relatively deep in the earth.

⇒ Cools slowly

⇒ large crystal form.

(ii) Extrusive Rock:

⇒ Extrusive Rocks form from lava at the surface of the earth.

⇒ Fast cooling

⇒ Small or no crystals

∴ Point D: Explanation.

the Point D is a place where the magma is formed by different minerals and iron due to the

(4)

Dated:...../...../20.....

M T W T F S

H/W C/W

Most heat of earth and  
this magma form the  
igneous rock and also  
the metamorphic rocks  
| this magma also melt  
the sedimentary and  
igneous rocks from molten  
forms of rocks and  
then the circle of form-  
ation of rocks continuous.

(C) Figure 3. Show the Structure of a Volcano and the Rock layer beneath

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

Ans Composite volcano

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

(a) Explain how gases trapped in the magma help produce the ash column.

Ans the composition of the gas in magma are

⇒ mostly  $H_2O$  (water vapour) and some  $CO_2$

⇒ minor amount of Sulfur Chlorine and fluorine gases.

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

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

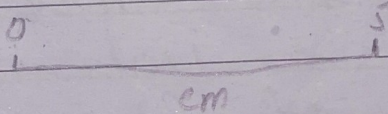
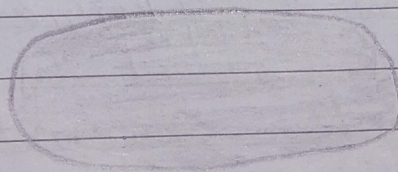
Ans An increase in the frequency and intensity of felt earthquakes

- \* Small change in heat flow
- \* Subtle swelling of the ground surface.

(ii) Suggest Two dangers that might result from Ash Fall near a volcano.

Ans Health concern after a volcanic eruption include infections disease respiratory illness, burns, injuries, from falls and vehicle accident related to the slippery heavy condensation caused by ash

Q. B. Figure below show the size and shape of typical sediment particles from the deposit produced.



4

2

1

(7)

M  T  W  T  F  S

H/W  C/W

Dated: ...../...../20.....

- 1, clay mud
- 2, rounded pebbles and sand
- 3, stopping sand layers
- 4, Angular boulders.

(i) in each box write down the most likely number from the the Deposit Produced Column in the table above

(ii) in your own words explain how sediment particles change as they are transported down-stream by a River?

Ans When the erosion of particle occurs down stream by River then the sediment change along some period of transportation and deposit in various places, these sediment changes from boulders to cobbles and after sometime of more.

(D) Answer the Following Questions?

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

Statement	Weather or Erosion
(i) Break down of rock without it being moved	(i) weathering
(ii) Wearing away of rock during transport rock particles	(ii) Erosion
(iii) A process caused by wind running water and moving ice	(iii) Erosion
(iv) A effect of plant roots growing in rock joints and fractures	(iv) weathering

(ii) A statue was made from limestone. Rains makes lime stone weather more quickly than sandstone. What substance in the rain cause this?

Ans the rain contain sulfuric acid these statue. the Reaction of the sulfuric acid with the Calcium Carbonate yield Calcium sulfate and carbonic acid.



(iii) Why Igneous rocks never contain fossils?

Ans Igneous rocks do not contain any fossils. This is because any fossils in the original rock will have melted when the rock melted to form magma.

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

Ans Igneous rocks contain randomly arranged interlocking crystals. The size of the crystal depends on how quickly the molten magma solidified. Magma that cools slowly will form an igneous rock with large crystals. Lava that cools quickly will form an igneous rock with small crystals.

(v)

(v) Describe one process that might be responsible for producing the large angular poorly sorted fragments in the scree sediments collecting

(10)

M T W T F S

H/W C/W

Dated: ...../...../20.....

at bottom of the cliff?  
Ans.: Since sediment at the  
bottom of the cliff  
are large angular and  
poorly sorted because of  
the process of alacial  
transport.