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Fig=1

## QNO:1 (a)

- Rock is broken down by frost Rain & Sun at (A) What name is given to process?

## ANS:NO:1 (a)

As we see the fig(1) it tell as that at point (A) the rock is broken down by Rain Sun & frost means that in this case geological weathering take place in this process at (A).

## QNO:1 (b)

- How is Sidiment Grains in river change During transport from A to B? State two Differencess likely appearance of the Grains?

## Ans:NO:1(b)

In fig (1) firstly When the rock broken Down in to smallar pieces at A due to geological Weathering these pieces of stone going from one place to another due to geological weathering than this process is called erosion after the rock are broken down from Weathering erosion Caories that sediment pice of rock & deposits it in a new location.
Water is also the agent of erosion by Water can take different forms le rain fall, Ocean

Waves & floods.
An other differences in the likely apperance of the Grains is When the sediment of Grains in a river moves due to erosion the accumulation & deposition a small partical & subsequent cementation of minerals or organic particals on the floor of oceans or other bodyies of water at the earth surface that makes the rock or sediment asedimentay Rock.

## QNO:1 (C)

How do loose sediment at C become changed in to solid rock?

## ANO:1 (c)

When the piec of Rock moves due to agent erosion & that sediment is slow down (loss of KE) & stop that sediment at one point then. this process is called Deposition Once particals have been transported to a new placess or Area they must be transformed from a collection of loose sediment this process is called Lithification (leth) means stone sediment of are fragments of Rock that or brocken down as a result of Weathering (Wind, Water, ice, Gravity Sedimentay rocks are formed by the Accumulation & deposition of small particals & subsequnt Cementation of minerals or organic particls on the floor of oceans or other bodies of Water at the earth surface. There are two types

of Sedimantay rocks (1) Clastic sedimantay rocks (2) organic Sedimantay rocks.

- Clastc Sedimantry rocks:-

Compacted sedimants, classified by size. for example Conglomerate, Sandstone, Shale.

- Organic Sedimantry rocks:-

They Evaporates & precipitates & biological matter. For example gypsum, coal, Rock salt

# QNO:1 (D)

Rock that are deeply buried in the Earth's Crust may undergo metamorphism. Describe two changes that happen in rocks & during metamorphism & explain point D?

# ANO:1 (D)

Metamamarphic rocks comes from the Transformation of existing rock Types in a process Is called metamorphism means Change in the Shap or form the rock may be igneous or sedimentary are subjected to heat & pressure causing profound physical or Chemical change there are two type of metamorphic rocks. Rock that is formed due to heat is called contact metamorphism & the rock that is formed due to pressure than it is called Regional metamorphism

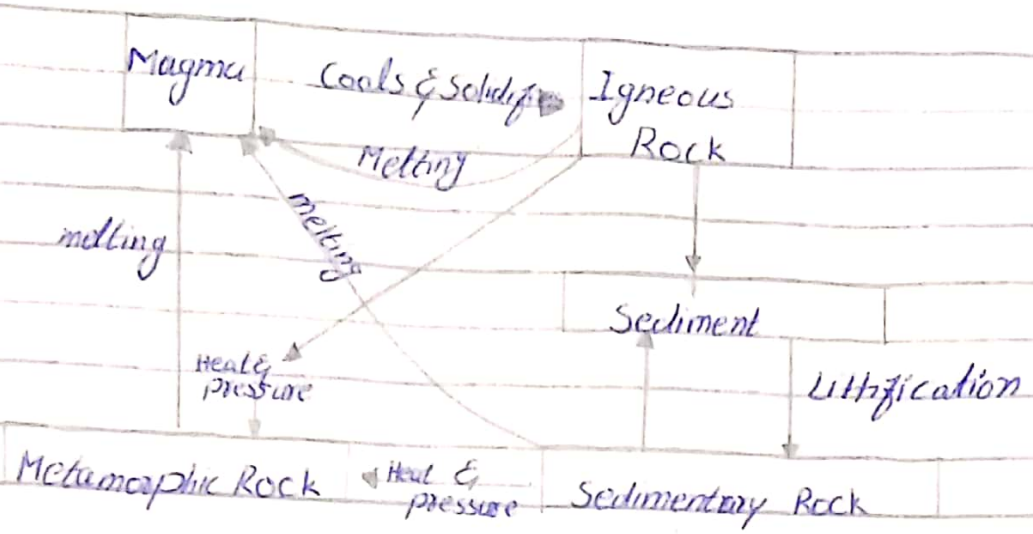
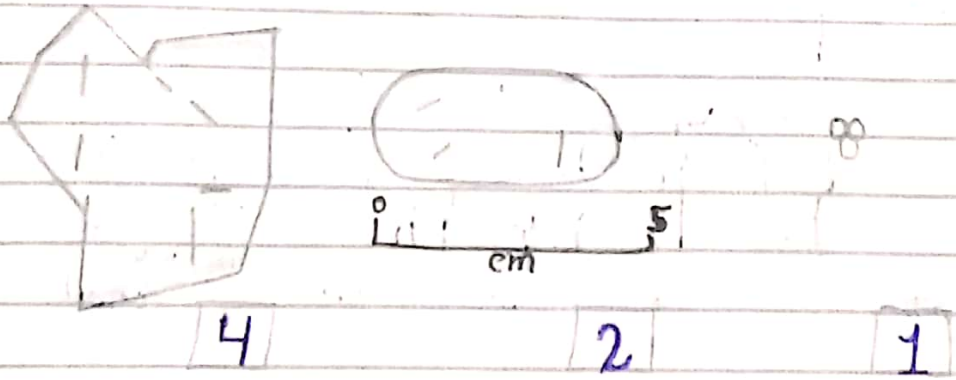



Fig = 2

# QNO:2 (A)

[i] In each box, Write down the most likely number from the Deposit produced column in the table above. fig (2)

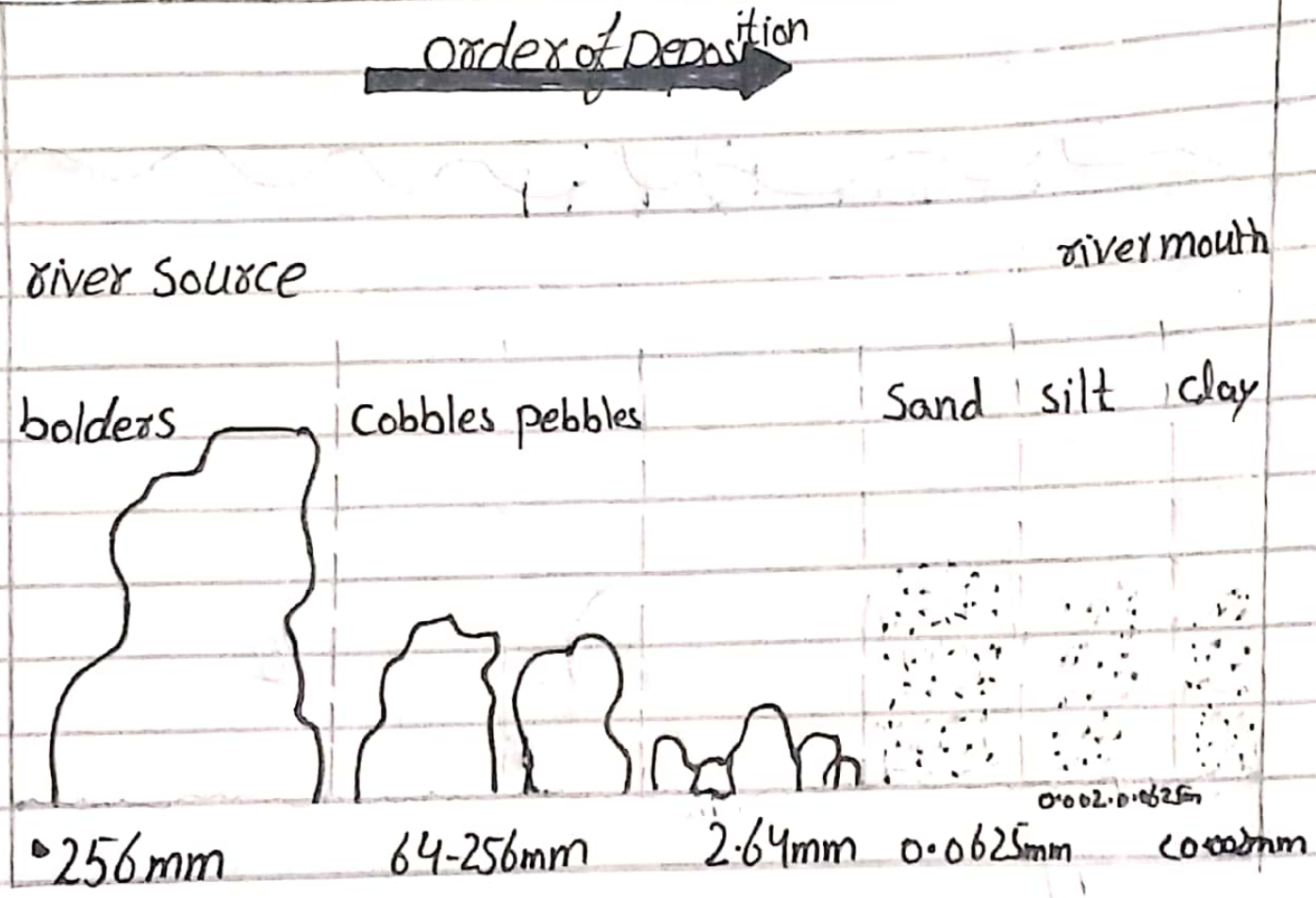



[ii] In your own words, explain how sediment particles change as they are transported downstream by a river.

# ANO:2 (A)

Sediment are fragement of rocks that are broken down as the result of weathering (Wind, Water, ice, gravity).
after geological weathering the Rocks are broken in to Smaller Pieces the

erosion carries that pice of stons from one place to another & depositis it to a new location the pice of ston during passes through these process Some of the ston are sattle down in the rivers oceans so the change in the particls down stream by a river is determind by other of deposition



Fig=3

# QNO:3 (A)

What type of volcano is shown in the fig by shape & if eruption is more often, which category it fits?

# ANO:3(A)

The shape of the volcano or of lava (4) types
1) Cincone volcano 2) Composite volcano
3) Sheild volcano 4) Lava dome

in fig (3) shows it is the second type of volcano which is Composite volcano because of it's side vent. it is an active volcano which erupts very often or fast mostly accure at Cousial plate boundries an active volcano is a volcano that has a had at least one eruption during the past 10000 years.

# QNO:3(b)

The eruption shown in fig 3) is producing an "Ash column" that rises thouands of meters above the volcano summit.
(a) Explain how gases trapped in the magma help produce the ash column.

# ANO:B (a)

A volcano is a opening whole or went that allows volcanic ash, hot Lava & gases to escape from migma chamber to bellow the surface the very hot particals eject out of a volcano (come) from deep

bellow the earth surface where the temperature can become so hot & the volcanic erruption these gases is responsible for the production of ash Coloum this volcanic eruption is explosive

# QNO:3 (b)

Many peple around the world live close to volcanoes So, When a volcano erupts, thousands of lives may be at risk.

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

(2) Suggest Two dangers that might result from Ash fall near a volcano.

# ANO:3 (1)

These signs may include very small earthquakes beneath the volcano, slight inflation, or swelling, of the volcano & increased emission of heat & gas from vents on the volcano," said U.S Geological Survery (USGS) volcano Hazards program Coordinator John Eichelberger. "Rising magma causes solid rock to break, sending earthquake signals," Eichelberger told life's Little Mysteries. "This pushes the ground surface upward, & boils off hot gas that travels ahead of the magma". Radar satellites are also used to detect swelling of the ground by comparing images taken at different times, according to Eichelberger.

# Q NO:3[b]

# ANO:3 (2)

- **EFFECTS ON ROADS:-**

The reduction in visibility from airborne ash alone may cause accidents. This danger is compounded by ash covering roads. Not only are road markings covered up, but thin layers of either wet or dry ash are very slippery, reducing traction. Thick deposits of ash may make roads impassable, cutting off communities from basic supplies.

- **RISK OF ROOF COLLAPSE:-**

1) Roofs can collapse from the weight of ash, resulting in injury or death for those underneath.
2) There is a danger of roof collapse whilst clearing ash from roofs due to the increased load of a person on an already overloaded roof
3) In several eruptions people have died after falling from their roofs while cleaning up ash

- **ANIMALS HEATh:-**

if the ash is coated in hydro-fluoric acid, the ash can be very toxic to grazing animals if they ingest ash-covered grass & soil.

Fig = 4

# QNO:4(D)

- [i] In the table below are statements that refer to either Weathering or Erosion. Complete the table by writing Weathering or Erosion in the spaces provided.

| | Statement | Weathering or Erosion |
|---|---|---|
| 1 | Breakdown of rock With out it being moved | Weathering |
| 2 | Wearing away of rock during transport of rock particles | Erosion |
| 4 | An effect of plat roots growing in rock joints & fractures | Weathering |
| 3 | A process caused by Wind, running water & moving ice | Erosion |

# QNO:4(D)

- [ii] A statue was made from limestone. Rain makes Limestone weather more quickly than sandstone. What substance in the rainwater causes this?

Limestone is ~~made~~ the example of carbonation is when chemical reaction occur between certain substances & carbonicacid This is the acid that come from carbondioxid when it dissolves in Water carbonicacid can be found in the rain thats why it Give to much demage but it slowly decompose the limestone. This is the Reason that Rainmakes Limestone Weather more quickly than Sandstone.

# QNO: 4 (D)

[iii] Why igneous rocks never contain fossils?

# ANO: 4 (Part [iii])

FOSSILS:-

Fossils are the petrified remains or traces of organic things, preserved in stone They are formed When the living thing are covered by sediment, & that sediment eventually turns into rock.

[Igneous rocks are formed directly from Lava or magma. Hence fossils are not found in igneous rock]

# QNO: 4 (D)

[iv] [Granite takes much longer to cool deep underground Than basalt lava at the Earth's surface. How & Why is the size of the crystals in granite different from the size of the crystals in basalt?

# ANO: 4 (D) (Part [iv])

Granite & basalt are the example of the igeneous rock it's defined as,
" igeneous rocks are prouduced Through the cooling & solidification of magma or Lava"
Magma is the materials Which are found inside the Earth Crust & Lava is When magma exposed on the Surface of earth igneous are classified in two categeries.

- **INTRUSIVE Rock :-**

Intrusive igeneous rock are form from magma often relitively deep in the Earth cools slowly large crystal.

- **EXTRUSIVE Rock :-**

Extrusive rock form from leva exupt at the surface of the earth cools fastly smallar or no crystals these are may be vesicular (Air bubbles).

Granite is the example of intrusive igneous rock that way it cools slowly & Take longer Time to cool because they are formed from magma undergound the earth surface & basalt is the type of extrusive igneous rock it cools fastly because they are formed from leva.

The size of the Granite crystal is grater than one mili meter 1mm & it is in the intrusive igneous rock catigary. basalt the crystal of basalt is smallar so it is in the categary of extrusive igneous rock that is way the size of the crystal in basalt is different from Granite.

Fig = 5

# QNO:5 (D)

Describe one process that might be responsible for producing the large, angular, Poorly sorted fragments in the scree sediment Collecting at the bottom of the cliff?

# ANO:5 (D)

As We see the rock cycle we know that the sidement from the geological Weathering these are sidement are called sidementary rocks These Type of rocks that of formad by the Accumulation or Deposition of small particals & subsequent cementation of minerals or organic particals on the floor of oceans or other bodies of Water at the earth surface.
The sidimentary rock process that might be responsible for producing the large, angular, poorly sorted fragments in the scree sedinment Collecting at the bottom of the cliff.

THE END