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Biology studies the evolution of some species of mammals depending on

- paleontology
- stratigraphy
- geochemistry
- geophysics

2

" A fold consists of 5 layers "

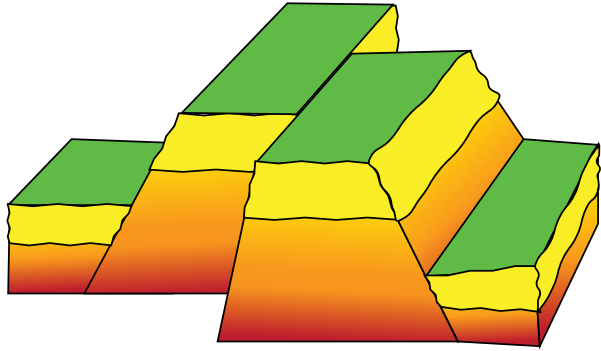
The ratio between the elements of the fold

" axial plane, axis and limb " respectively is :

- 1 : 5 : 2
- 5 : 1 : 2
- 1 : 2 : 5
- 2 : 5 : 1

3

The opposite figure represents a model of a group of tectonic structures :



Which structure is not present in the figure ?

- reverse fault
- normal fault
- horst fault
- strike - slip fault

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As a result of the tectonic pressure , fault (A)

which its plane inclines on the horizontal plane by an angle of (12°)

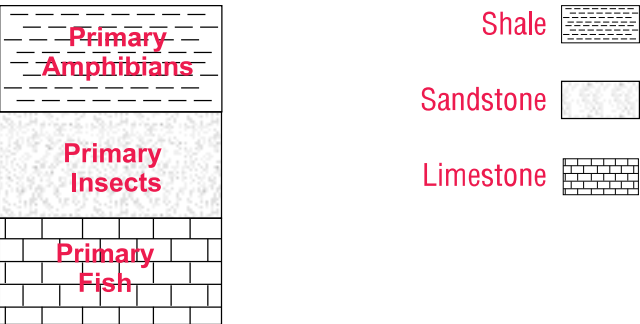
and fault (B) which its plane inclines on the horizontal plane by an angle (52°) ,

It's expected to classily faults (A) and (B) respectively are

- thrust and reverse
- reverse and normal
- reverse and thrust
- thrust and normal

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The opposite figure represents the depositional sequence containing some fossils.



What's the geological time which expresses this sequence ?

- Less than 542 million years
- more than 700 million years
- less than 90 million years
- more than 542 million years

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A silicate mineral that was used by the paleolithic in hunting animals is

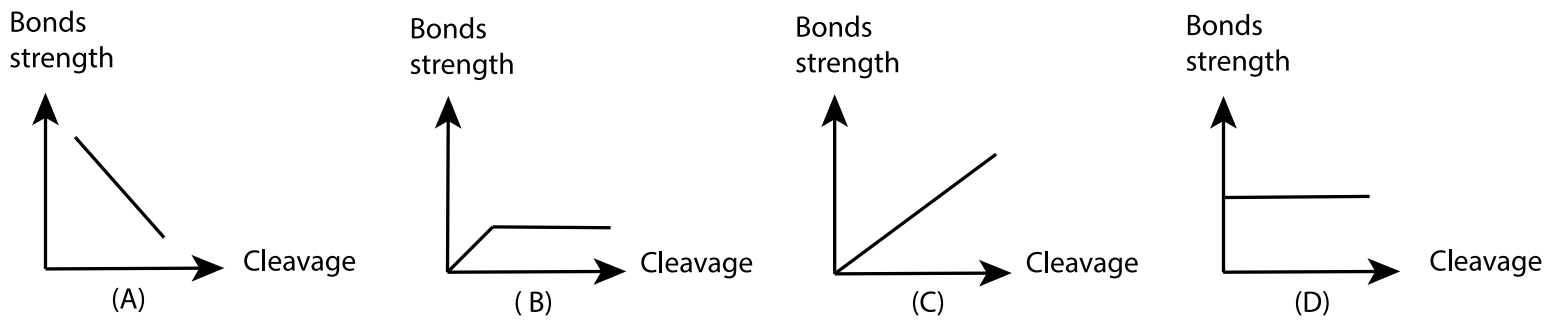
- chert
- feldspars
- quartz
- hematite

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The mineral which is not scratched by the streak plate is

- amethyst
- calcite
- apatite
- orthoclase

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Which of the following graphs represents the right relation between the cleavage property and the strength of chemical bonds in minerals ?

- A
- B
- C
- D

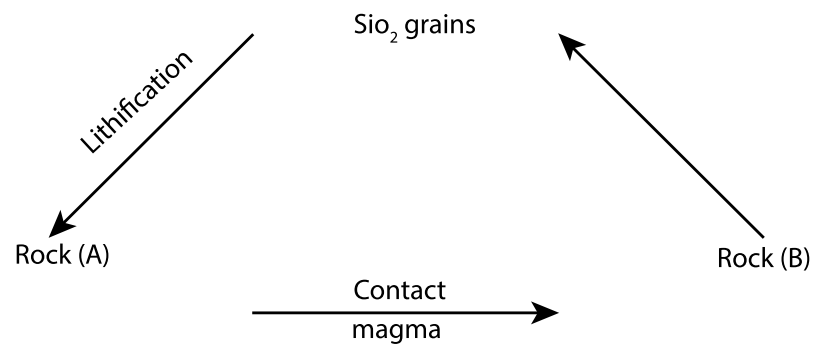
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Which of the following has a metallic luster , and splits in more than one direction when hammering it ?

- galena
- quartz
- graphite
- calcite

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The following figure expresses a part of the rock cycle



What are the rocks (A) and (B) respectively ?

- sandstone - quartzite
- quartzite - sandstone
- sands - quartzite
- quartzite - sands

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During your visit to a geological museum , you found a white rock sample with attractive colors .

What's the type of the rock ?

- massive metamorphic
- basic plutonic igneous
- intermediate plutonic igneous
- clastic sedimentary

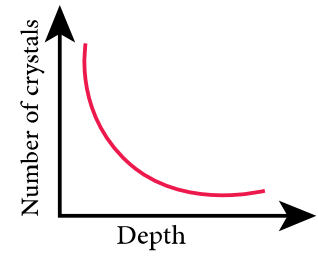
12

During your visit to a rock gallery you found a statue made of a rock in which the colours of the minerals components appear ; they are olivine, pyroxene and amphibole .

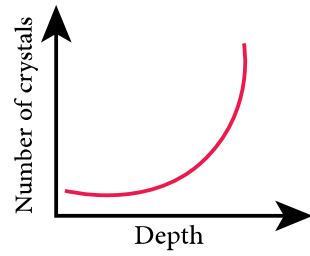
What is the rock ?

- gabbro
- diorite
- peridotite
- basalt

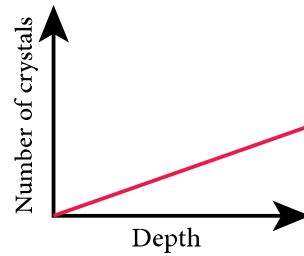
Which of the above graphs expresses the crystallization of the igneous rocks ?



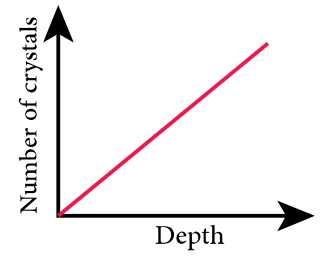
(A)



(B)



(C)



(D)

- A
- B
- C
- D

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Which of the following is the main factor of volcanic eruption ?

- an energy in magma due to trapped gases
- pressure forces caused joints
- tension force caused normal fault
- compression force caused reverse fault

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A magma of low viscosity intruded between rocks, sandstone was above while granite was below.

What are the rocks resulted from this intrusion from the above and below this magma respectively ?

- quartzite - gneiss
- schist - marble
- marble - schist
- gneiss - quartzite

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All of the following are from the factors causing appearance of genetic changing during last periods except

- rising and lowering the sea level during the glacial period
- changing the environmental condition
- variation between water - covered areas and land
- difference in topographic terrains

The flow of magma from below the deposition region to below the fragmentation region leads to

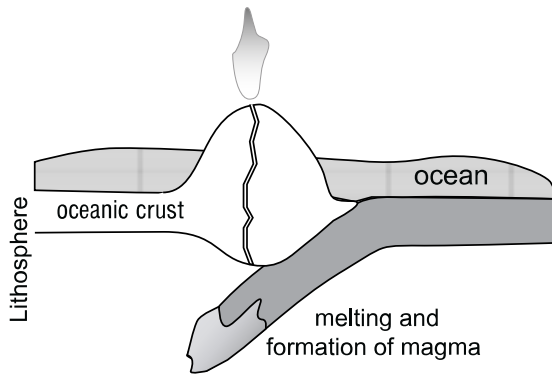
- non disappearance of mountains in spite of the continuous erosion
- the pressure of magma on rocks below it forming folds
- presence of joints in the deposition regions
- formation of oceanic islands

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The distance between the top of Everest and the bottom of its root reaches about km

- 44
- 54
- 22
- 88

The opposite diagram illustrates the movement of tectonic plates in certain region



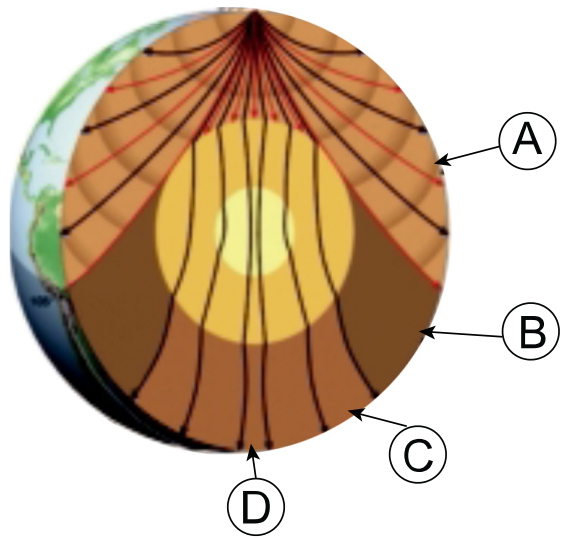
What's the type of motion shown in the diagram and the type of rock formed ?

- convergent producing basaltic rocks
- convergent producing andesitic rocks
- divergent producing basaltic rocks
- divergent producing andesitic rocks

The Himalaya mountains chains have been formed as a result of

- destructive motion accompanied by faults produced from tectonic pressure
- sliding motion accompanied by faults produced from tectonic pressure
- divergent motion accompanied by faults produced from tectonic tension
- constructive movement accompanied by joints produced from tectonic tension

Study the following figure where (A , B , C , D) are seismographic stations then conclude



Which of the following stations received all the body waves ?

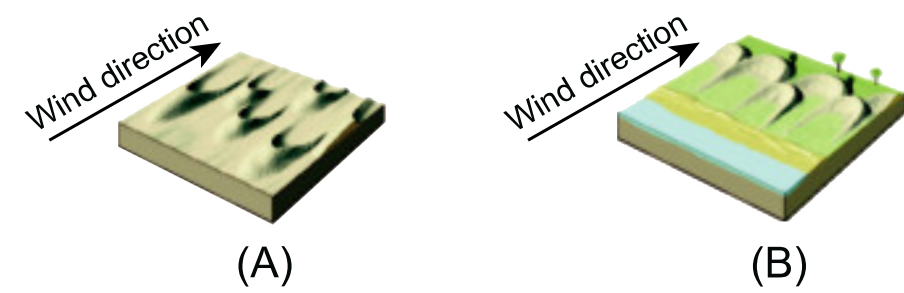
- A
- B
- C
- D

Which of the following can distinguish between the magnitude of earthquakes than the intensity of earthquakes?

- the constancy of amount of the same earthquake
- its variable amount for the same earthquake
- the scale is divided into 12 scales
- measured by Richter scale which is the most common scale of intensity

What explain the formation of successive spheroid shells on the surface of granite mass ?

- denudation - rock expansion - minerals decomposition
- weathering - rock expansion - minerals hydration
- denudation - mineral contraction - rock decomposition
- weathering - minerals contraction - rock hydration

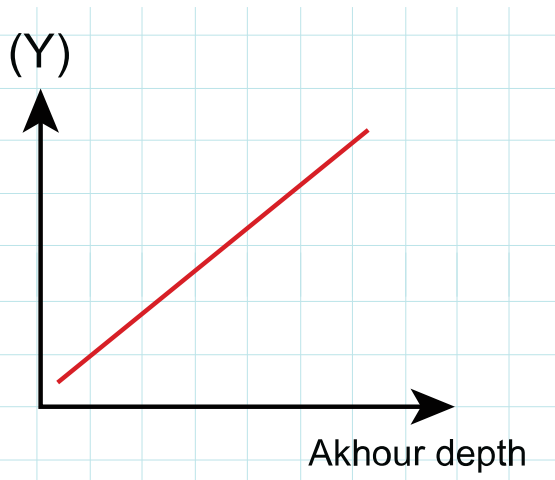


The opposite figure represents the products of wind deposition.

What do both figures (A) and (B) express respectively ?

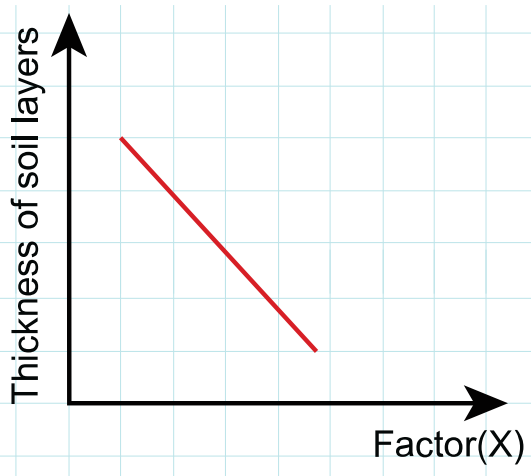
- crescent dunes , coastal dunes
- el - gharwd , coastal dunes
- lime dunes , longitudinal dunes
- coastal dunes , el - gharwd

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The letter (Y) on the graph represents all the following except

- resistance of the rocks for erosion
- the speed of running water
- the charge of torrent water
- the slope of the stream



Study the graph then conclude what does the factor (X) express ?

- the degree of rock hardness
- the effect of the climatic factors
- the effect of living organisms
- the time factor

If you know that the water table in certain region is on a depth of (45) m .

What's the suitable depth to drill a well to obtain the ground water from this region ?

- more than 45 m
- 45 m
- 35 m
- 25 m

Which of the following doesn't explain the formation of caves in limestone rocks at El- Mokattam region ?

- growth of the crystals of the rock minerals
- the decomposition and dissolution of the rock minerals
- changing the mineral composition of the rock
- changing the chemical composition of the rock

Which of the following phenomena are produced as a result of sudden increasing of the river stream slope ?

- water falls
- river terraces
- river delta
- river meanders

The deposits of the continental slope zone are different from those of the abyssal zone in all of the following except.....

- presence of micro organic calcareous and silica sediments
- a source for muddy deposits
- the colour of the muddy deposits
- presence of remains of micro organisms called radiolaria