

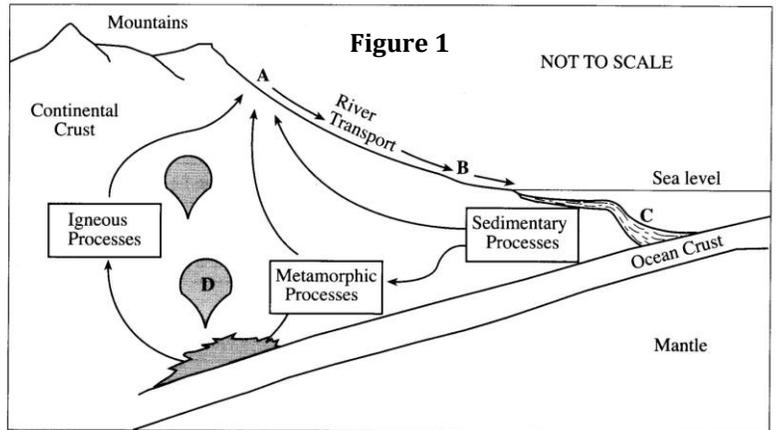
# Assignment/Quiz (April/2020)

**Subject:** Engineering Geology  
**Pages:** 2.

**Instructor:** Engr. Imtiaz Khan  
**Duration:** 6Days

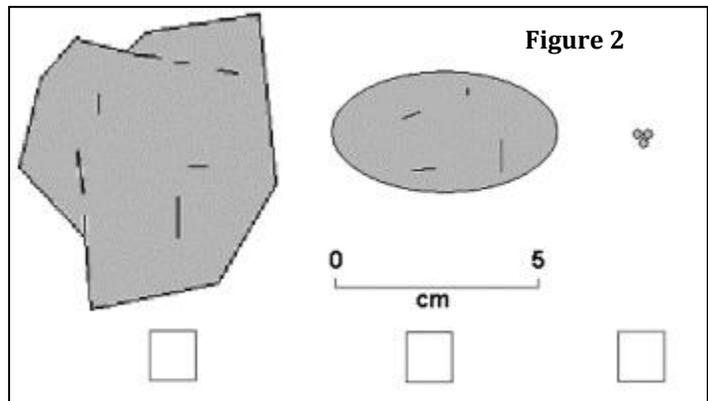
**A. Figure 1,** shows part of the Earth’s crust and the locations where some Rock Cycle processes take place.

- (a) Rock is broken down by frost, rain and sun at **A**. What name is given to this process?
- (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.
- (c) How do loose sediments at **C** become changed into solid rock?
- (d) Rocks that are deeply buried in the Earth’s crust may undergo metamorphism. Describe **two** changes that happen in rocks during metamorphism & explain point **D**?



**B. Figure 2,** below shows the size and shape of typical sediment particles from the deposit produced.

1. Clay mud
2. rounded pebbles and sand
3. Sloping sand layers
4. Angular boulders



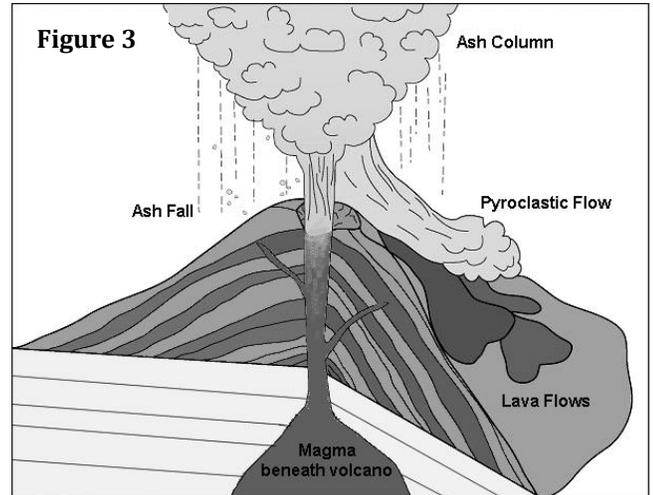
- (i) In each box, write down the most likely number from the Deposit produced column in the table above.
- (ii) In your own words, explain how sediment particles change as they are transported downstream by a river

**C. Figure 3**, shows the structure of a volcano and the rock layers beneath.

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

(II) The eruption shown in Figure 3 is 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.
- (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.
  - (ii) Suggest TWO dangers that might result from Ash Fall near a volcano.



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 spaces provided.

Statement	Weathering OR Erosion
Breakdown of rock without it being moved	
Wearing away of rock during transport of rock particles	
A process caused by wind, running water and moving ice	
An effect of plant roots growing in rock joints and fractures	

- (ii) A statue was made from limestone. Rain makes limestone weather more quickly than sandstone. What substance in the rainwater causes this?
- (iii) Why igneous rocks never contain fossils?
- (iv) Granite takes much longer to cool deep underground than basalt lava at the Earth’s surface. How and why is the size of the crystals in granite different from the size of the crystals in basalt?
- (v) 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?