

Duty 02

Let two magmas **A** and **B** come from a hot spot from a rock **C** of the mantle.

The two magmas **A** and **B** after crystallization gave the two rocks **A** and **B** represented in the figure below,

- 1) What is the phenomenon that allowed the fusion into magma in this case?
- 2) Is this rock **C** acidic, intermediate, basic or ultrabasic? The two magmas **A** and **B** came from the same rock **C** by fusion,
- 3) classify these two magmas **A** and **B** according to their nature,
- 4) What are the two important phenomena that made the two magmas different despite their common origin?
- 5) Which of the two magmas **A** and **B** is the most differentiated? Give a single justification from figure 1?
- 6) Give the mineralogical compositions (minerals in %) of the three rocks **A**, **B** and **C**?
- 7) Calculate the degree of coloration of the three rocks **A**, **B** and **C**?

