# **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Country:\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# **Duration: 45 minutes**

# **Practical 04**

# **Geo Field evaluation**

**Field kit**: hammer, hydrochloric acid, knife

Note: THE ROCKS AT STOPS 1 AND 2 MAY CONTAIN ONE OR MORE MINERALS.

# **Stop 1**

1. Using the kit, identify the rock here (Circle the correct answer from the options given below). (5 points)

1. Asphalt
2. Basalt
3. Chert
4. Shale
5. Dolomite
6. Gabbro
7. Gneiss
8. Granite
9. Quartzite
10. Limestone
11. Marl
12. Mica schist
13. Porphyritic rock
14. Obsidian
15. Sandstone
16. Schist
17. Rhyolite

2. Based on its characteristics, what can you conclude about the rock? (5 points)

a. It is a sedimentary rock.

b. It is a plutonic rock.

c. It is a volcanic rock

d. It is a metamorphic rock.

# **Stop 2**

3. Using the kit, identify the rock here. (Circle the correct answer from the options given below). (5 points)

a. Limestone

b. Marl

c. Mica schist

d. Porphyritic rock

e. Obsidian

f. Sandstone

g. Schist

h. Rhyolite

i. Asphalt

j. Gabbro

k. Gneiss

l. Granite

m. Quartzite

n. Shale

o. Dolomite

p. Chert

q. Basalt

4. Which mineral/s listed below is/are most likely the constituent/s of this rock at Stop 2? (5 points)

a. Calcite

b. Magnetite

c. Quartz

d. Clay

e. Garnet

f. Orthoclase

g. Olivine

h. Halite

5. What is the age relationship between the rock at Stop 1 and the rock at Stop 2? (10 points)

a) The rock at Stop 1 is younger.

b) The rock at Stop 1 is older.

c) Both rocks are of the same age.

6. Which of the processes of the rock cycle listed below is demonstrated by the rocks at Stops 1 and 2?

Mark **ALL** the possible processes.

Note: **Each** correct answer = 1 point; **Each** wrong answer = -1 point

1. melting
2. slow cooling
3. eruption
4. intrusion
5. fast cooling
6. slow cooling followed by fast cooling
7. uplift
8. erosion
9. transportation
10. sedimentation
11. lithification
12. burial
13. regional metamorphism
14. contact metamorphism

7. Chronologically arrange **ONLY** those processes that you marked above from the oldest to the youngest. Write the English letter corresponding to the process above the arrow.

(Note: some process/es could appear twice.)

(1 point for each correctly arranged process)

 a

Youngest

Oldest

8. Answer the following question based on what you have explored **here** and what you have seen. Which of the schemes listed below best summarizes the interactions of the earth systems? (10 points)

Geosphere

Biosphere

a

Hydrospheree

Atmosphere

d

Hydrosphere

Geosphere

Biosphere

Atmosphere

c

Atmosphere

b

Hydrosphere

Biosphere

Geosphere

Atmosphere

Biosphere

Geosphere

Hydrosphere