

IESO 2012 practical TEST Geosphere

Name _____ Nationality _____

1. Draw a geologic cross section along A-B in the box to the right. If a bore hole is drilled from point C, at what depth will you encounter the shale-limestone boundary? (16.pts)

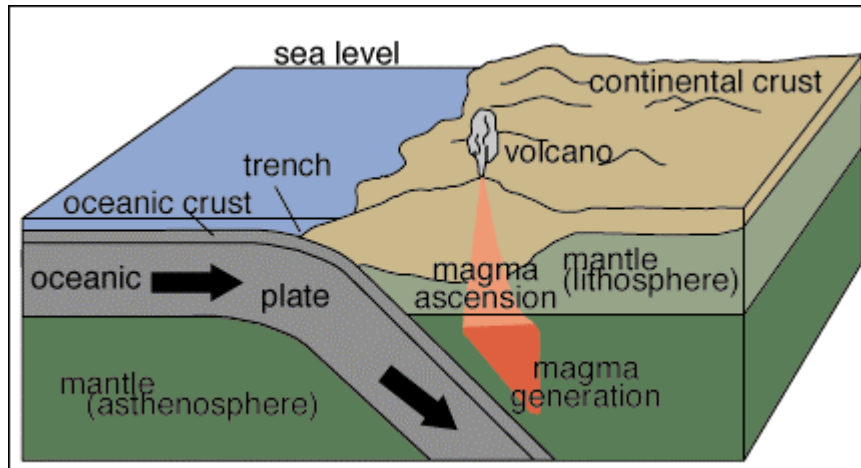
Answer

2. Name the rocks in trays A, B and C and show where (X, Y and Z in the diagram) they occur in terms of plate tectonics (12 pts).

A- Granite

B- Obsidian

C- Pumice.



http://www.platetectonics.com/book/page_12.asp

3. Name the sedimentary rock in tray D. What is the environmental significance of its colour? (6 pts)

A: Shale/ black shale; Anoxic/reducing environment

4. Name the rock in tray E (among the choice of answers provided), and identify the fossil present in it.(6 pts)

a. mudstone- b. limestone c. sandstone d. dolomite; Plant fossil

5. Name the rock in tray F.(5pts)

A: schist/ amphibolite schist

For question numbers 6-8: Name the minerals and mention their diagnostic property (one property per mineral is enough).

6. Quartz; hardness, lustre, no cleavage, fractures (5 pts)

7. Muscovite (mica); cleavage, sheety, flaky, hardness (5 pts)

8. Talc; hardness (4 pts)

9. Please measure the strike and dip of a plane assigned. (10 pts)

10. Please measure the strike and dip of a plane assigned.(10 pts)

11. Name the rock used at the flag mast. Name the two primary mineral constituents in it.(6 pts)

Pink granite/ granite; quartz and feldspar

12. Name the rock used for the step in the hall. What rock was it originally? (6 pts)

Marble; limestone

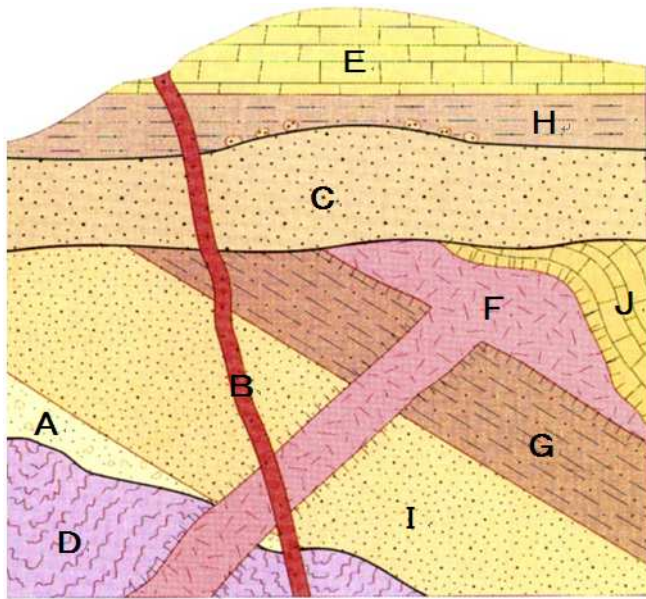
13. What would you call the long feature in the rock? Name the dominant mineral constituent in this feature. (6 pts)

Vein; feldspar

14. Identify the structure you see in the encircled area. (3 pts)

Fault/ microfault.

15. Choose the correct chronological sequence of events represented in the map.



- a) A-B-C-E-F-G-I-J-D-H
- b) D-A-I-G-F-J-C-H-E-B**
- c) I-J-D_B-C-A_E-G-F-H
- d) B-E-F-G-I-A- H-C-J -D

16. Match the following:

- | | |
|--------------------|--|
| a) Inclined beds | i) straight line outcrop intersecting topographic contours |
| b) horizontal beds | ii) straight line outcrop parallel to topographic contours |
| c) vertical beds | iii) outcrop intersecting topographic contours |
| | iv) outcrop parallel to topographic contours |

17.