GEO110 test, November 14 2018

You may answer the questions in Norwegian or English.

1. Most large coal deposits are of post-Silurian age. Petroleum deposits more frequently are older than that. What can explain this difference? (2 p.)

2. How does the porosity typically differ between quartz arenite and lithic arenite? Why? (4 p.)

3. Mention two stratigraphic methods with which lithostratigraphic units can be correlated in time. (4 p.)

4. How can dropstones be identified in rock bodies? (2 p.)

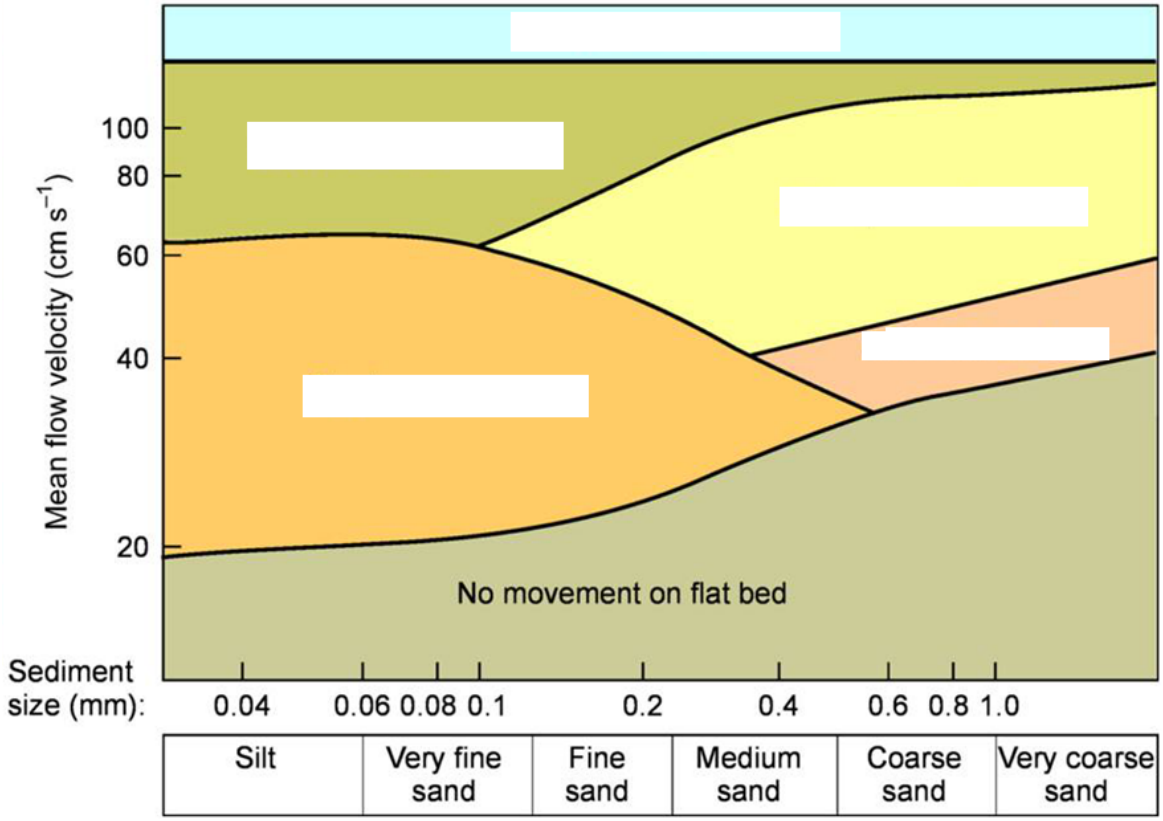
5. Groundwater production sometimes leads to subsidence and tectonic activity of the loose (soil and sediment) ground. Explain why. (2 p.)

6. Why do different volcanoclastic products form from different magma composition? (4 p.)

7. Why does claystone usually have a higher Al/Si ratio than sandstone? (2 p.)

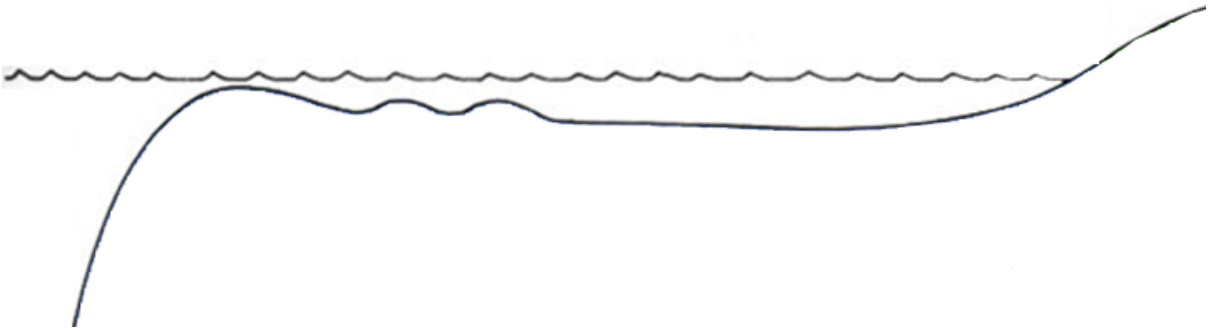
8. What is desert pavement? How does it form? (2 p.)

9. Fill in the typical sedimentary structures expected at the different velocities and grain sizes in the Harms diagram. (5 p.)



10. Which sedimentary process is the Bouma sequence related to? Sketch a complete Bouma sequence. (5 p.)

11. In the coastal cross section below, mark where you would expect to most likely find these rocks types: (a) oolith, (b) framestone, (c) bioturbated mudstone, (d) non-bioturbated mudstone, (e) pelmicrite, (f) rudstone. (6 p.)



12. Give the rock samples in the three boxes as precise rock names as possible. (6 p.)

Box number: _____ Rock type: _____

Box number: _____ Rock type: _____

Box number: _____ Rock type: _____

13. Answer the questions next to each of the images. (10 p.)

Width of image: ca. 10 cm

a. Mark the current direction(s) directly in the image.

b. Structure name:

_____

c. Environment / formation process:

_____

Width of image: ca. 10 km

a. Mark the dominating current direction directly in the image.

b. Structure name:

_____

See pen in the image for scale

a. Mark the dominating current direction(s) directly in the image.

b. Structure name:

_____

See hammer in the image for scale

a. Mark the dominating current direction(s) directly in the image.

b. Mark the way up directly in the image.

c. Way of formation:

_____

d. Structure name:

_____

See trees in the image for scale

a. Mark the current direction(s) directly in the image.

b. Environment / formation process:

_____

c. Structure name:

_____

See 5-mm scale in the image for scale

a. Mark the way up directly in the image.

b. Environment / formation process:

_____

c. Structure name:

_____

Width of image: ca. 10 cm

a. Mark the way up directly in the image.

b. Environment / formation process:

_____

c. Structure name:

_____

Max. 54 points in the test.