



ภาควิชาธรณีวิทยา
คณะวิทยาศาสตร์
จุฬาลงกรณ์มหาวิทยาลัย

วิชา 2307551

Geotectonics

แบบฝึกหัดที่ 1 & 2



ชื่อนิสิต..... รหัส.....

ศัพท์ทางธรณีแปรสัณฐาน (Glossary of Geotectonics)

วัตถุประสงค์

1. เพื่อให้ นิสิต เกิดความเข้าใจในคำศัพท์ทางธรณีแปรสัณฐาน
2. เพื่อฝึกฝนการอ่านภาษาอังกฤษ และ
3. เพื่อให้เกิดการฝึกฝนการเขียน block diagram
4. เพื่อให้ นิสิต เกิดการพัฒนาความรู้เรื่องธรณีแปรสัณฐานหลังจากเรียนจบวิชานี้

1. Key Terms : (วาดรูปพร้อมกำหนดตำแหน่งคำในรูป)

asthenosphere	Pangaea
continental drift	plate
convection cells	plate tectonics
convergent plate boundary	polar-wander curve
curie temperature	reversely magnetized
divergent plate boundary	rift
hot spots	seafloor spreading
island arc	subduction zone
lithosphere	tectonics
normally magnetized	transform fault
paleomagnetism	mantle plume

2. Completions : (เติมคำลงในช่องว่าง)

1. The plastic zone in the upper mantle is called the _____ .
2. The temperature above which a mineral loses its magnetic properties is the _____ temperature.
3. A _____ magnetized rock crystallized at a time when the earth's magnetic field was similar to its present orientation.
4. Alfred Wegener propounded the theory of _____ .
5. A chain of volcanic islands associated with a subduction zone is a(n) _____ .
6. The driving mechanism for plate tectonics seems to be _____ in the asthenosphere.
7. The island of Hawaii is moving over a _____ .
8. Breakup of the supercontinent called “ _____ ” occurred at about 200 million years ago.
9. The crust and uppermost mantle comprise the _____ .
10. _____ studies the movement and deformation of the earth's crust.

3. Matching : (จับคู่)

Match the type of plate boundary on the right with the feature or process on the left ; some blanks will require more than one answer if several plate boundaries apply.

- | | |
|--|--------------------|
| 1. _____ subduction | a. divergent |
| 2. _____ San Andreas in California | |
| 3. _____ earthquakes | b. convergent |
| 4. _____ island arc | |
| 5. _____ volcanic activity | c. transform fault |
| 6. _____ rift zone | |
| 7. _____ Japan | |
| 8. _____ Andes of South America | |
| 9. _____ Red Sea | |
| 10. _____ Mid-Atlantic Ridge | |
| 11. _____ lateral movement of plates pass each other. | |
| 12. _____ collision of India with Asia to produce the Himalayas. | |

4. True/False Questions : (จับถูกจับผิด)

- _____ 1. Ore deposits may be formed by hydrothermal fluids associated with magmas.
- _____ 2. The Pacific Plate has been moving the slowest.
- _____ 3. Plate tectonics is driven largely by convection in the liquid outer core.
- _____ 4. Evaporites may be deposited in rift basins.
- _____ 5. All rocks are normally magnetized.
- _____ 6. If the magnetic poles have always been close to the geographic poles, then the continents must have moved.
- _____ 7. Paleomagnetism is a remanent magnetism displayed by certain rocks.
- _____ 8. The asthenosphere extends downward to the core.
- _____ 9. The United States lies entirely on the North American Plate.
- _____ 10. Earthquake zones can outline plate boundaries.

5. Multiple Choice Questions : (เลือกข้อที่ถูกต้องที่สุด)

1. Plates originate at _____ and are destroyed at _____ :
 - a. rifts, subduction zones
 - b. transform faults, rifts
 - c. subduction zones, rifts
 - d. rifts, transform faults
 - e. subduction zones, transform faults
2. The typical speed of a lithospheric plate is :
 - a. 1 mm per year
 - b. 2-3 cm per year
 - c. 3 m per year
 - d. 18 m per year
 - e. 3 km per year
3. Plate tectonics postulates all of the following except :
 - a. that the earth's crust is broken into rigid slabs
 - b. that continental material is denser than oceanic
 - c. that crustal blocks move around the earth's surface
 - d. that continents can be rifted to form oceans
 - e. that mountains may be produced by plate collisions

4. Evidence for seafloor spreading consists of :
 - a. magnetic stripes on the seafloor
 - b. the decreasing age of the seafloor with increasing distance from the oceanic ridges
 - c. the thickness of the continental crust
 - d. all of the above
 - e. none of the above
5. If the theory of continental drift is correct, the continents last began drifting apart about :
 - a. 10,000 years ago
 - b. one million years ago
 - c. 50 million years ago
 - d. 200 million years ago
 - e. 3.8 billion years ago
6. Which of the following is not the name of a lithospheric plate :
 - a. Antarctic
 - b. Atlantic
 - c. Pacific
 - d. South American
 - e. Eurasian
7. Plate tectonics helps to integrate observations made regarding :
 - a. continental drift
 - b. earthquakes
 - c. volcanoes
 - d. seafloor spreading
 - e. all of the above
8. The earth's magnetic field has :
 - a. remained the same throughout geologic time
 - b. reversed itself once in the geologic past
 - c. reversed itself many times in the geologic past
9. Continental drift is supported by :
 - a. fossil evidence
 - b. climatic evidence
 - c. polar – wander curves
 - d. similar rock types on separate continents
 - d. all of the above
10. The North American Plate is moving to the _____, away from the Mid-Atlantic Ridge :
 - a. east
 - b. south
 - c. southeast
 - d. west
 - e. northeast

6. Questions for Further Thought :

1. Describe the rock cycle in a plate-tectonic format.
2. Most researchers today agree that large-scale horizontal movements of the earth's lithospheric plates are responsible for mountain building processes, as proposed by plate tectonics. Do you have any ideas about how mountain building was looked at prior to plate tectonics ?