

Exam 3 Review

1. Crustal Deformation

1. be able to describe what is meant by the term deformation
2. be able to define
 1. **force**
 2. **strain**
 3. **stress**
3. be able to describe the three different stress that may be experienced
 1. **compressional**
 2. **tensional**
 3. **shear**
4. be able to describe the conditions necessary to cause deformation
 1. be able to define **elastic deformation**
 2. be able to define **ductile deformation**
 3. be able to define **brittle deformation**
5. What type of stress will result in folds?
6. be able to identify:
 1. **limb**
 2. **hinge**
7. be able to identify:
 1. **symmetrical** and **asymmetrical anticlines**
 2. **symmetrical** and **asymmetrical synclines**
 3. **plunging folds**
 4. **monocline**
 5. **domes**
 6. **basin**
8. Be able to define faults and determine stress associated with each type of fault:
9. be able to define:
 1. **dip slip fault**
 1. be able to identify the **hanging wall** and **foot wall**

2. be able to identify **normal faults**
3. be able to identify **reverse faults**

2. **strike slip fault**

1. be able to identify **right lateral** and **left lateral faults**

10. Mountain Building

1. be able to describe **isostasy** and how it relates to mountain building

2. **Earthquakes**

1. be able to explain what an earthquake is
2. be able to define **focus**
3. be able to describe **elastic rebound** theory
4. be able to describe **seismographs**
5. be able to describe seismic waves
 1. be able to fully describe is a surface wave
 1. **Love wave**
 2. **Rayleigh Waves**
 2. be able to fully describe **P-waves**
 3. be able to fully describe **S-waves**
6. be able to define **epicenter**
 1. be able to describe how to locate the epicenter using p-wave and s-wave travel times
7. be able to describe global distributions of earthquakes
 1. be able to describe a **shallow focus** earthquake
 2. be able to describe an **intermediate focus** earthquake
 3. be able to describe a **deep focus** earthquake
 4. be able to describe where you would expect to find shallow, intermediate, and deep focus earthquakes
8. be able to describe the **Mercalli intensity scales**
 1. be able to describe the draw back of intensity scales
9. be able to describe **Richter magnitude scales**
 1. be able to describe how magnitude increases reflect the energy released by an earthquake
10. be able to describe how earth materials influence the destruction caused by earthquakes
 1. be able to describe the process of **liquefaction**

2. be able to describe the cause of **Tsunamis**
11. Be able to explain how seismic waves have been used to discover Earth's interior layering.
 1. What produces S & P wave shadow zones?

1. Geologic Time

1. be able to define **relative dating**.
 1. be able to describe the principles of relative dating.
 1. **Superposition**
 2. **Cross-cutting**
 3. **Original Horizontality**
 4. **Principle of Fossil Succession**
 2. be able to apply the principles of relative dating when interpreting the geologic history of an area.
 3. Be able to define **unconformity**
 1. be able to interpret the events that produce:
 1. Angular unconformities
 2. Nonconformities
 3. Disconformities
2. be able to define **absolute dating**.
 1. be able to describe **radiometric dating**.
 2. be able to describe:
 1. **alpha decay**
 2. **beta decay**
 3. **electron capture**
 3. Be able to use isotopic ratios to determine the age of igneous and metamorphic bodies.
 4. Be able to use radiometric ages of igneous and metamorphic bodies to indirectly date sedimentary bodies.