

Earth Systems 3209 - Final Review Sheet

≥ Circle “Y” (Yes) if you understand the outcome, “N” (No) if you do not understand the outcome, or “?” if you are unsure whether or not you understand the outcome (i.e. review/study required).

Unit 1

➤ What makes Earth Science different from other science?

Y Or N Or ?

(Pg’s 2-7)

➤ What are the major branches of Earth Science?

Y Or N Or ?

(Throughout Textbook)

➤ What are the minor branches of Earth Science?

Y Or N Or ?

(Throughout Textbook)

➤ Give examples of how Earth Science is related to other sciences.

Y Or N Or ?

(Pg’s 2-7)

➤ Draw diagrams of the four stages of the Nebular Hypothesis. Be able to explain each diagram.

Y Or N Or ?

(Pg’s 19-20)

➤ **STSE 1** – “The Search For Other Solar Systems”. (Solar System, Extrasolar Planets, Habitable Zone, Microlensing Method, Transit Photometry Method, Radial Velocity Method, Astrometry Method, Direct Imaging, Goldilocks Zone, Gemini North, Kepler Mission).

Y Or N Or ?

(STSE Module 1)

➤ Describe the process of segregation.

Y Or N Or ?

(Pg’s 2—23)

➤ Which factors allowed for segregation to occur?

Y Or N Or ?

(Pg’s 20-21)

➤ What three sources of heat caused Earth to melt?

Y Or N Or ?

(Pg’s 20-21)

➤ What are the layers of Earth? Know the physical and compositional properties of each layer.

Y Or N Or ?

(Pg’s 20-23)

➤ What happens to density, temperature, and pressure with progression from the lithosphere to the inner core?

Y Or N Or ?

(Pg’s 20-23)

➤ Give examples of how Earth is a dynamic planet.

Y Or N Or ?

(Pg 23)

➤ Describe the four spheres. Give examples that demonstrate the interaction of the four spheres. (E.g., earthquakes, volcanic eruptions, water cycle.)

Y Or N Or ?

(Pg's 12-14)

- Define system.

Y Or N Or ?

(Pg's 12-15)

- Know the order in which the four spheres originated. (G-A-H-B)

Y Or N Or ?

Unit 2

- Define uniformitarianism.

Y Or N Or ?

(Pg's 6-7)

- Distinguish between uniformitarianism and catastrophism.

Y Or N Or ?

(Pg's 5-7)

- Use uniformitarianism to explain why certain events will occur again in the future.

Y Or N Or ?

(Pg's 6-7)

- Distinguish between relative time and absolute time.

Y Or N Or ?

(Pg's 7-9) and (Pg's 218-228)

- Understand relative dating techniques/principals/laws, which include: superposition; cross-cutting relations; inclusions; horizontality; fossil succession (index fossils); and unconformities (angular unconformity, disconformity, and nonconformity).

Y Or N Or ?

(Pg's 218-228)

- **Be able to interpret the steps in the formation of geologic cross-sections using techniques/principals/laws (See Point Above). Core Lab 1.**

Y Or N Or ?

(Pg's 218-228) and (Core Lab 1)

- Know your cross-section symbols (i.e. rock symbols).

Y Or N Or ?

(Core Lab 1)

- Understand buried lava flows versus magma intrusions.

Y Or N Or ?

(Pg's 60-61)

- Understand absolute dating techniques/processes/features, which include: varves; growth rings; and radioactive dating.

Y Or N Or ?

(Pg's 228-235)

- Define half-life, isotope, parent elements, and daughter elements.

Y Or N Or ?

(Pg's 228-234)

- Know the isotope pairs (e.g. U-238 decays to Pb-206).

Y Or N Or ?

(Pg. 231)

- **STSE 2** – “Labrador Zircons and their Link to Radiometric Dating and Absolute Dating”. (Geochronology, isotope pairs, limitations of radioactive dating, zircon, U-Pb system.)

Y Or N Or ?

(STSE Module 2)

- **Know how to do the different radioactive dating problems. (THERE ARE FIVE DIFFERENT TYPES OF PROBLEMS).**

Y Or N Or ?

- Know the sources of error and limitations of radioactive dating.

Y Or N Or ?

(Pg’s 231-234)

- Be able to use a radioactive decay curve.

Y Or N Or ?

(Pg 230)

- What is the age of Earth?

Y Or N Or ?

(Pg 236)

- Understand the importance of fossils in determining the geologic time scale. (e.g., evolutions, extinctions).

Y Or N Or ?

(Pg 226) and (Pg 8) and (Pg’s 236-240)

- Why is Precambrian time considered to be a very uncertain time?

Y Or N Or ?

(Pg’s 237-239)

- Know the importance of the following dates: 4.54 Ba; 545 Ma; 248 Ma; and 65 Ma.

Y Or N Or ?

(Pg’s 236-241) and (Pg 10)

- Define fossil.

Y Or N Or ?

(Pg 183)

- What three conditions are necessary for fossilization?

Y Or N Or ?

(Pg 184)

- Describe the different types of fossilization?

Y Or N Or ?

(Pg’s 183-186)

- **Core Lab 2** – “Estimating Dinosaur Size and Speed from Trackways”. (Trackway, gait, foot length, leg length, body length, stride length, relative stride, herbivore, carnivore, dimensionless speed, movement type.)

Y Or N Or ?

(Pg 186) and (Core Lab 2)

- Know the divisions of the geologic time scale. (eons, eras, periods, epochs).

Y Or N Or ?

(Pg 10) and (Pg’s 236-239)

- Why did the Precambrian have the least amount of life forms?

Y Or N Or ?

(Pg’s 237-239)

- Recognize that the Phanerozoic eon represents the emergence of complex life forms. (Starts at 545 Ma).

Y Or N Or ?

(Pg 236)

- What are the three eras that comprise the Phanerozoic eon?

Y Or N Or ?

(Pg 236)

- List the life forms that dominate each era. “Since I Found Flying Angels Riding Brooms Forget Medicine”.

Y Or N Or ?

(Pg 10)

- Know the “Ages” as they relate to the different eras.

Y Or N Or ?

(Pg 10)

- Know the two mass extinction events, which include: Permian Period – Triassic Period (248 Ma – Extinction of trilobites and other marine species); and Cretaceous Period – Tertiary Period (65 Ma – Extinction of dinosaurs).

Y Or N Or ?

(Pg 10)

Unit 3

- Understand the following terms: atom; ion; element; compound; and molecule.

Y Or N Or ?

(Pg’s 35-36)

- Describe how atoms combine to form compounds, which include: ionic (ionic bonds); molecular (covalent bonds); and metallic (metallic bonds).

Y Or N Or ?

(Pg’s 36-38)

- Know the abundance of elements that comprise the crust. (Ottawa Senators Are Insane)

Y Or N Or ?

(Pg 44)

- Define a mineral (5 Points).

Y Or N Or ?

(Pg 32)

- Know the seven different mineral groups (Rules).

Y Or N Or ?

(Pg’s 44-55)

- Based on formulas, be able to classify minerals in terms of mineral groups.

Y Or N Or ?

(Pg 54)

- Know the two sub-groups of the silicate minerals.

Y Or N Or ?

(Pg’s 49-54)

- Know which elements make minerals dark in colour and which elements make minerals light in colour.

Y Or N Or ?

(Pg’s 49-54)

- Know the basic structure of the silicate mineral group.

Y Or N Or ?

(Pg 44)

➤ **Core Lab 3 – Specific Gravity and Mineral Identification.**

Y Or N Or ?

(Core Lab 3) and (Pg 43)

➤ Understand the different mineral properties, which include: crystal shape; colour; streak; cleavage; fracture; hardness; luster; specific gravity; odour; acid test; taste; magnetism; tenacity; double refraction; and fluorescence.

Y Or N Or ?

(Pg's 40-44)

➤ Explain the process in determining the specific gravity of an unknown mineral.

Y Or N Or ?

(Pg 43) and (Core lab 3)

➤ Explain why the specific gravity value will be the same for two different-sized samples of the same mineral.

Y Or N Or ?

(Pg 43) and (Core lab 3)

➤ Explain why minerals exhibit different mineral properties? (Three Reasons).

Y Or N Or ?

(Pg 40)

➤ Give one similarity and two differences between the minerals graphite and diamond.

Y Or N Or ?

(Pg 41)

➤ Compare and contrast minerals (e.g. quartz and mica).

Y Or N Or ?

(Pg's 40-44) and (Core Lab 3)

➤ Know the roles of mineralogists, crystallographers, geochemists, and gemologists.

Y Or N Or ?

➤ **Know the uses of different minerals.**

Y Or N Or ?

(Pg 54)

➤ Which mineral properties are useful?

Y Or N Or ?

(Pg's 40-43)

➤ Which mineral properties are not as useful as the others?

Y Or N Or ?

(Pg's 40-44)

➤ Why is colour not a good property to use when trying to identify minerals?

Y Or N Or ?

(Pg 41)

➤ Understand Moh's Hardness Scale.

Y Or N Or ?

(Pg 42)

➤ Understand which minerals have "special properties".

Y Or N Or ?

(Pg's 43-44)

➤ Understand how to use the percent error formula.

Y Or N Or ?

(Core Lab 3)

- Define the term rock. Distinguish rocks from minerals.

Y Or N Or ?

(Pg 33)

- List minerals that make up rocks. (e.g., granite, gabbro).

Y Or N Or ?

(Pg 33) and (Pg 67) and (Pg 69)

- Be able to draw and explain the rock cycle.

Y Or N Or ?

(Pg's 15-17)

- Which two processes are involved in the process of lithification?

Y Or N Or ?

(Pg's 15-16) and (Pg's 158-159)

- Which three conditions are required for metamorphism to occur?

Y Or N Or ?

(Pg's 15-17) and (Pg's 193-196)

- Know which metamorphic rocks would be classified as low-grade, medium-grade, high-grade, and extremely high-grade.

Y Or N Or ?

(Chapter 7 Throughout)

- Distinguish between magma and lava.

Y Or N Or ?

(Pg's 60-61)

- Give examples of dark-coloured minerals.

Y Or N Or ?

(Pg 69) and (Pg 73)

- Give examples of light-coloured minerals.

Y Or N Or ?

(Pg 69) and (Pg's 70-72)

- Understand the difference between ultramafic, mafic, intermediate, and felsic igneous rocks.

Y Or N Or ?

(Pg 69) and (Pg's 70-74)

- Understand Bowen's Reaction Series. (Determines which minerals you will get in different rocks).

Y Or N Or ?

(Pg 67) and (Pg 79)

- Know which elements make rocks light and which elements make minerals (rocks) dark.

Y Or N Or ?

(Pg's 65-69)

- **KNOW THE "BROTHER-SISTER" IGNEOUS ROCKS.**

Y Or N Or ?

(Pg 67) and (Pg 69)

- Know that igneous rock textures are determined by cooling rate.

Y Or N Or ?

(Pg's 62-65)

- Distinguish between plutonic and volcanic igneous rocks.

Y Or N Or ?

(Pg 60)

- Distinguish between intrusive and extrusive igneous rocks.

Y Or N Or ?

(Pg 60)

- Know the different igneous rock textures, which include: aphanitic; phaneritic; porphyritic (two-stage cooling); vesicular; and glassy (frothy and compact).

Y Or N Or ?

(Pg's 62-65)

- Which igneous rocks give you which igneous rock textures?

Y Or N Or ?

(Pg 69)

- **Core Lab 3** – Igneous, Sedimentary and Metamorphic Rocks.

Y Or N Or ?

(Core Lab 3)

- **STSE 3** – “Diamonds – Their Formation and Properties”. (Kimberlite, carat, cratons, kimberlite pipes, indicator minerals, properties of diamonds.)

Y Or N Or ?

(Pg 54) and (Pg's 598-600) and (STSE Module 3)

- Distinguish between weathering and erosion.

Y Or N Or ?

(Pg 130)

- What effect does increased burial and compaction have on the porosity and permeability of sedimentary rocks?

Y Or N Or ?

(Pg 159)

- Gives examples of cements that could exist in sedimentary rocks.

Y Or N Or ?

(Pg 159)

- Describe the three classes of sedimentary rocks.

Y Or N Or ?

(Pg's 159-160)

- What is another word for clastic?

Y Or N Or ?

(Pg 159)

- Give examples of clastic sedimentary rocks.

Y Or N Or ?

(Pg's 160-165)

- Which factor distinguishes among the clastic sedimentary rocks?

Y Or N Or ?

(Pg 160)

- Distinguish between conglomerate and breccia.

Y Or N Or ?

(Pg's 164-165)

- Relate particle size to current velocity. (Breccia – Cong. - Sst. – Silt. – Sh.).

Y Or N Or ?

(Pg 160)

- Understand vertical sorting and horizontal sorting.

Y Or N Or ?

(Pg 160) and (Pg's 179-181)

- Contrast among the clastic, chemical, and biochemical sedimentary rocks.

Y Or N Or ?

(Pg 173)

- Describe the different sedimentary environments and the clastic sedimentary rocks that relate to each environment.

Y Or N Or ?

(Pg's 174-182)

- Define turbidites. Describe how they form.

Y Or N Or ?

(Pg 181)

- Be able to list sedimentary rocks that are evaporates and precipitates.

Y Or N Or ?

(Pg's 165-170)

- Understand the processes of evaporation and precipitation.

Y Or N Or ?

(Pg's 165-170)

- Describe the different sedimentary environments and the chemical sedimentary rocks that relate to each environment.

Y Or N Or ?

(Pg's 165-170)

- Contrast stalactites and stalagmites. Define travertine.

Y Or N Or ?

(Pg 321) and (Pg 165)

- Be able to list sedimentary rocks that are biochemical in nature.

Y Or N Or ?

(Pg 173)

- Describe the sequence of formation of coal.

Y Or N Or ?

(Pg 171)

- Describe the different sedimentary environments and the biochemical sedimentary rocks that relate to each environment.

Y Or N Or ?

(Pg's 165-172)

- Which rock types could be metamorphosed?

Y Or N Or ?

(Pg's 15-17)

- Describe the process of metamorphism.

Y Or N Or ?

(Pg 193) and (Pg's 15-17)

- Describe the three possible changes that result from metamorphism.

Y Or N Or ?

(Pg's 193-196)

- Explain why chemically-active fluids are so important to the metamorphism process.

Y Or N Or ?

(Pg's 195-196)

- Distinguish between the metamorphic rock textures foliated and non-foliated.

Y Or N Or ?

(Throughout Chapter 7)

- List examples of rocks that are foliated and rocks that are non-foliated.

Y Or N Or ?

(Throughout Chapter 7)

- Know which igneous, sedimentary, or metamorphic rocks become metamorphosed into which metamorphic rocks.

Y Or N Or ?

(Throughout Chapter 7)

- Distinguish between contact metamorphism and regional metamorphism.

Y Or N Or ?

(Pg's 198-207)

- Understand which agents dominate in relation to contact metamorphism and which agents dominate in relation to regional metamorphism.

Y Or N Or ?

(Pg's 198-207)

- Understand at which locations it is appropriate to expect for contact metamorphism.

Y Or N Or ?

(Pg's 198-201)

- Understand how rafts form in relation to buried lava flows and magma intrusions.

Y Or N Or ?

- Understand at which locations it is appropriate to expect for regional metamorphism.

Y Or N Or ?

(Pg's 201-207)

- Understand the sequence of change experienced by the sedimentary rock shale as it is buried deeply along a subduction zone in a regional metamorphism environment.

Y Or N Or ?

(Pg's 202-205)

- Explain, using a diagram or diagrams, how both types of metamorphism can exist at convergent plate boundaries.

Y Or N Or ?

- Identify careers that relate to rocks.

Y Or N Or ?

Unit 4

- Describe the Theory of Continental Drift. Be sure to understand how Wegener thought that the continents were moving. What were the causes of the “drifting” continents as proposed by Wegener?

Y Or N Or ?

(Pg 515)

- **Understand the evidence that supports the Theory of Continental Drift.**

Y Or N Or ?

(Pg's 514-519)

- Define Pangaea and know when it existed.

Y Or N Or ?

(Pg 515)

- Describe the evolution of the Theory of Plate Tectonics. Be sure to understand the contributions of the various scientists involved.

Y Or N Or ?

(Throughout Chapter 19)

- Understand how convection currents are responsible for the moving continents.

Y Or N Or ?

(Pg 520)

- Understand the Theory of Seafloor Spreading.

Y Or N Or ?

(Pg's 523-525)

- Distinguish between oceanic crust and continental crust and relate both to plate tectonics.

Y Or N Or ?

(Pg's 475-477)

- Understand how plates move in relation to crust and mantle convection.

Y Or N Or ?

(Pg 520) and (Pg 526)

- **Describe and give worldwide examples of plate boundaries.**

Y Or N Or ?

(Pg's 526-539)

- Distinguish between constructive and destructive plate margins.

Y Or N Or ?

(Throughout Chapter 19)

- **Describe the three types of collisions (i.e. convergent plate boundaries). Understand the molten composition that relates to each collision.**

Y Or N Or ?

(Pg's 524-538)

- **Describe a rift valley and how it evolves into a divergent plate boundary.**

Y Or N Or ?

(Pg's 527-533)

- **Understand the evidence that supports the Theory of Plate Tectonics.**

Y Or N Or ?

(Pg's 521-547)

- Understand the three contributions of J. Tuzo Wilson.

Y Or N Or ?

(Pg. 540)

- Be able to draw a diagram to help explain **hotspot volcanism**.

Y Or N Or ?

(Pg's 543-545)

- Recognize that divergent plate boundaries are often offset over short distances by transform faults.

Y Or N Or ?

(Pg's 540-541)

- **STSE 4 – “The Geology of Newfoundland and Labrador”. (Western Zone, Central Zone, Eastern Zone, Cape Ray-Baie Verte Line Fault, Hermitage-Dover Fault, Gros Morne National Park.)**

Y Or N Or ?

(STSE Module 4)

- Describe the geology of the island of Newfoundland.

Y Or N Or ?

- Define crustal deformation.

Y Or N Or ?

(Pg 415)

➤ Define force.

Y Or N Or ?

(Pg 415)

➤ Define stress.

Y Or N Or ?

(Pg 415)

➤ Describe the three types of forces/stresses that produce crustal deformation.

Y Or N Or ?

(Pg 415)

➤ Describe the three types of deformation.

Y Or N Or ?

(Pg's 415-419)

➤ Describe the factors that affect deformation.

Y Or N Or ?

(Pg's 415-419)

➤ Define faulting and relate it to the factors that are responsible for it.

Y Or N Or ?

(Pg's 425-432)

➤ Understand the two categories of faulting, the specific types of faults, and the forces/stresses involved.

Y Or N Or ?

(Pg's 427-432)

➤ Define folding.

Y Or N Or ?

(Pg's 421-425)

➤ Relate folding to the factors that affect deformation.

Y Or N Or ?

(Pg's 421-425)

➤ Describe the two common types of folds.

Y Or N Or ?

(Pg's 422-424)

➤ Define earthquake.

Y Or N Or ?

(Pg 441)

➤ Describe the three causes of earthquakes.

Y Or N Or ?

(Pg's 441-443)

➤ Define seismic waves, focus, epicentre, foreshock, and aftershock.

Y Or N Or ?

(Pg's 441-443)

➤ Understand at which locations earthquakes occur.

Y Or N Or ?

(Pg's 440-441)

➤ Relate plate tectonics to earthquake types (shallow, intermediate, and deep).

Y Or N Or ?

(Pg's 449-451)

➤ **Describe the properties of earthquake waves.**

Y Or N Or ?

(Pg's 444-447)

➤ Explain how scientists know that the outer core is a liquid.

Y Or N Or ?

(Pg 482)

➤ **Distinguish between the Richter scale and Modified Mercalli scale.**

Y Or N Or ?

(Pg's 451-454)

➤ Understand the relationship between Richter scale and amplitude on S-waves.

Y Or N Or ?

(Pg's 452-456)

➤ Understand the relationship between Richter scale and energy released from earthquakes.

Y Or N Or ?

(Pg's 452-455)

➤ **Core Lab 5 – “Locating an Earthquake Epicenter”.**

Y Or N Or ?

(Pg's 447-449) and (Core lab 5)

➤ **Describe the process involved in locating the epicentre of an earthquake.**

Y Or N Or ?

(Pg's 447-449)

➤ Be able to understand from seismograms if earthquakes are large (or small) or close to a station (or far from a station).

Y Or N Or ?

(Pg 447)

➤ **Describe factors that affect the nature of volcanic eruptions.**

Y Or N Or ?

(Pg's 89-93)

➤ Define volcano.

Y Or N Or ?

(Pg 96)

➤ Describe the three types of volcanoes.

Y Or N Or ?

(Pg's 97-102)

➤ **Describe the eruption type that relates to the three different types of volcanoes, and relate each to the different plate boundaries.**

Y Or N Or ?

(Pg's 97-102)

➤ **Understand which rocks form at each of the plate boundaries.**

Y Or N Or ?

(Throughout Chapter 4)

➤ Distinguish between the two types of lava.

Y Or N Or ?

(Pg 93)

➤ Compare and contrast Yellowstone National Park from the Hawaiian Island Chain.

Y Or N Or ?

(Pg 107)

➤ Describe the formation of a lava plateau as a result of a fissure eruption.

Y Or N Or ?

(Pg's 108-109)

➤ Describe some short-term global effects of volcanic activity.

Y Or N Or ?

(Pg's 122-124)

➤ Describe some long-term global effects of volcanic activity.

Y Or N Or ?

(Pg's 122-124)

Unit 5

➤ Define economic minerals.

Y Or N Or ?

(Pg. 580) and (Pg 583)

➤ Understand factors that determine if a mineral is an economic mineral.

Y Or N Or ?

➤ Define ore.

Y Or N Or ?

(Pg 583)

➤ **Describe the different types of economic mineral deposits. Be able to draw and label diagrams of each of the economic mineral deposits.**

Y Or N Or ?

(Throughout Chapter 21)

➤ Distinguish between open-pit mining and underground mining. Be sure to understand the advantages (pros) and disadvantages (cons) of each type of mining.

Y Or N Or ?

➤ List techniques for exploring for economic mineral deposits and petroleum.

Y Or N Or ?

➤ **Core Lab 6 – “Geologic Mapping and Cross-sections”.**

Y Or N Or ?

(Core Lab 6)

➤ **Core Lab 7 – “Seismic Reflection Imaging”.**

Y Or N Or ?

(Core Lab 7)

➤ **Describe techniques for processing ore deposits. Be able to draw and label diagrams for floatation, gravity separation, and heap leaching.**

Y Or N Or ?

➤ Define petroleum, crude oil, natural gas, hydrocarbons, wet gases, and dry gas.

Y Or N Or ?

(Pg's 602-603)

➤ Know examples of hydrocarbons.

Y Or N Or ?

(Pg's 602-603)

➤ **Describe the origin and the process of formation of petroleum. Be sure to include (1) organic matter and (2) and preservation potential.**

Y Or N Or ?

(Pg's 602-603)

➤ Understand the two conditions that are necessary for organic matter to be preserved.

Y Or N Or ?

(Pg's 602-603)

➤ In relation to petroleum, be able to explain how Earth's spheres are interconnected.

- Y Or N Or ?**
- Define kerogen.
- Y Or N Or ?**
- (Pg 602)**
- Understand how kerogen evolves into petroleum as a result of diagenesis, catagenesis, and metagenesis.
- Y Or N Or ?**
- Give examples of source rocks, reservoir rocks, and cap rocks.
- Y Or N Or ?**
- (Pg's 602-604)**
- Understand characteristics of source rocks, reservoir rocks, and cap rocks.
- Y Or N Or ?**
- (Pg's 602-604)**
- Understand the terms porosity and permeability as they relate to reservoir rocks.
- Y Or N Or ?**
- (Pg 603)**
- STSE 5 – “Well-Logging”
- Y Or N Or ?**
- Draw and describe the four different petroleum traps. On each trap be able to identify source rocks, reservoir rocks, cap rocks, good drill locations, presence of gas, presence of oil, and presence of water.
- Y Or N Or ?**
- (Pg's 603-604)**
- Know that “GOW” occurs in petroleum traps due to density differences.
- Y Or N Or ?**
- (Pg 604)**
- Describe the two different means of extracting petroleum from Earth.
- Y Or N Or ?**
- Understand that petroleum exists in the subsurface under natural pressure.
- Y Or N Or ?**
- Know two ways of getting the remaining petroleum out of a trap.
Examples include pumping in water and filling the reservoir.
- Y Or N Or ?**
- Understand the formation of Alberta's oil sands (tar sands) and know some characteristics of the crude oil.
- Y Or N Or ?**
- How is the crude oil extracted away from the sediments in relation to the tar sands in Alberta?
- Y Or N Or ?**
- Describe the three methods of refining petroleum.
- Y Or N Or ?**
- Define sustainable development.
- Y Or N Or ?**
- Be able to identify some environmental, economic, political, social, and cultural factors that are involved in extracting resources from the Earth.
- Y Or N Or ?**

THIS REVIEW SHEET SHOULD GUIDE YOUR STUDY FOR THE PUBLIC EXAMINATION IN JUNE OF 2015. USE IT WISELY!

PAGE NUMBERS RELATE TO THE COURSE TEXTBOOK.