**CGF3M FINAL EXAM REVIEW**

Below is an outline of topics and questions to guide you as you study for the final exam. Remember to think about the “Big picture” rather than small details or facts. Several of the questions below are from previous tests. You may see *similar* questions on the final exam. Use your notes, any handouts, and the Online Learning Platform to help you study. Don’t forget to look over any PowerPoint presentations that are online. Check online to see if there are any handouts/lessons that you may have missed. Attempt to answer the questions on your own, and we will take some up each day.

**The Final Exam is on:**

NOTE: I will NOT accept ISP’s after the exam.

**Format**: The exam will be comprised of short answer questions, definition questions, diagrams/graphs that will need to be completed, and some longer essay style questions.

The exam will be structured into four sections, each outlining the four units that we have studied:

**Unit 1: The Earth – A Vibrant Planet**

**Unit 2: The Lithosphere**

**Unit 3: The Atmosphere**

**Unit 4: The Hydrosphere**

**Unit 5: The Biosphere**

**UNIT 1: THE EARTH – A VIBRANT PLANET**

1. List the four spheres of the Earth, along with one characteristic of each.
2. How the four spheres affect regions of the Earth – how are they all connected?
3. Describe the four layers of the Earth.
4. Explain three of the main pieces of evidence that Alfred Wegener used to support Continental Drift.
5. The Milankovitch Theories – precession, eccentricity and obliquity
6. Difference between a rotation and a revolution
7. The Park Disaster Model – draw, interpret and explain how it works

**UNIT 2: THE LITHOSPHERE**

1. What is an earthquake? Explain HOW an earthquake happens.
2. How are body waves and surface waves different (earthquakes)?
3. Describe the difference between the focus and the epicenter of an earthquake.
4. Compare the different types of plate boundaries, and explain what can happen at each. (Convergent collision, convergent subductive, divergent, and transform)
5. Anatomy of a volcano – diagram
6. Explain how and why intraplate volcanism (hotspots) occur.
7. Case Study: Yellowstone Super Volcano
8. Richter Scale and Mercalli Scale – what do they show?

**UNIT 3: THE ATMOSPHERE**

1. Label the different layers of the atmosphere and give characteristics of each.
2. Explain the Hadley, Polar and Ferrel cells.
3. Explain the Inter Tropical Convergence Zone and how it impacts climate.
4. Construct and interpret a climate graph.
5. Explain how a tropical storm forms.
6. Explain some of the devastating effects of Hurricane Katrina OR Typhoon Haiyan.
7. Explain why storms are becoming stronger and more frequent – climate change.
8. GIS – what is it? How can it help countries prepare for tropical storms?

**UNIT 4: THE HYDROPSHERE**

1. Ocean currents – The Great Ocean Conveyor Belt and Gyres
2. The Great Pacific Garbage Patch
3. El Niño and La Niña – causes and effects (teleconnections)
4. Waves – key terms
5. Types of wave – constructive and destructive
6. Four types of erosion
7. The formation of ONE coastal landform (the one you studied in class)
8. Physical and human causes of flooding
9. River Hydrographs – key terms, how to draw, how to interpret
10. Pakistan Flood 2010 Case Study – location, causes and effects
11. Hydropolitics

**UNIT 5: THE BIOSPHERE**

1. Biodiversity definitions (genetic, species, ecosystem).
2. Factors affecting biodiversity (global, regional, local, human).
3. Definition and examples of biomes.
4. Location of biomes.
5. Definition and examples of biodiversity hotspots.
6. Where do biodiversity hotspots occur?
7. Ecosystem services and goods.
8. Economic, cultural and ecological value of ecosystems.
9. Value of coral reefs and tropical rainforests.
10. Threats to biodiversity.
11. Invasive species – definitions and examples.
12. Nutrient flows in ecosystems.
13. Gersmehl diagrams.
14. How economic development affects ecosystems.
15. Sustainable yield definitions.
16. Managing ecosystems – key players.
17. Managing ecosystems – strategies.
18. Managing ecosystems – example case studies.