Final Examination

Please respond to Question 1 but ONLY four of the other seven question sets. You will find it will assist you greatly to organize your thoughts before you begin to write - scratch paper will be provided for this purpose, and you may discard or take this with you (no, it needn't be turned in). In all cases, please be as thorough but concise in your responses as you can. Please respond to all questions in complete sentences and proper English.

Please avoid cryptic notation such as "w/", "w/o", "b/c" etc. It doesn't take THAT much additional work to write the words out properly, and makes it SO much easier to read what you've written 😊.

Please present all of your responses in the blue book(s) provided. And PLEASE try to remember that I can't give credit for anything I can't read! PLEASE label specific items on any photos from the exam to which you refer in your responses, such that there can be no question as to what you are discussing.

You have a space limit of two blue books for this exam, and it SHOULD be something you should be able to complete in two hours. However, if you need additional time, you can have it, but if you're still writing at three hours you should ask whether you are well-served by continuing longer.

Each question set is worth 40 points; the exam as a whole, then, is worth 200 out of your semester total.

"Perhaps the most valuable result of all education is the ability to make oneself do the thing one has to do, when it ought to be done, whether one likes it or not; it is the first lesson that ought to be learned [but] probably the last lesson that is learned thoroughly."

- T. H. Huxley

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PLEASE READ ALL QUESTIONS VERY CAREFULLY!
Please respond to Question 1 but ONLY four of the other seven question sets.

1. Discuss the major points of two of your classmates' presentations, other than your own, from the selection of presentations listed below. Include all major points and a summary of the subject matter. (2 @ 20 pts. each)

**Nikolajs Batarags** Differentiating between Kettles and Dolines in Upstate New York

**Tim Becker** Tectonic uplift as it influences fluvial systems

**Clara Bicher** The East African Rift Valley: Tectonics, Volcanism and Lake Basins

**Tara Chizinski** Impacts of seismic events on mass-wasting and fluvial processes

**Hannah Dhonau** Glacial and Quaternary Geology of the Brooks Range, Alaska (changed)

**Arran Dindorf** Process and rates of creep in solifluction (=gelifluction) terrains

**Wyatt Fereday** Flood Basalt Features of the Snake River Plain

**Nate Katsiaficas** Evidence for and against liquid water flow on the surface of Mars

**Gabe Lerner** Surficial Geology of Venus

**Daren McGregor** Attu Island, Aleutians: Island Arc Volcanism and Coastal Processes

**Ramsey Meigs** Glacial Geology of Mt. Katahdin: Caldwell vs. Davis

**Emily Mininberg** El Niño and La Niña: Impacts on Global Climate Systems

**Morgan Monz** Differential Modes of Origin of Barrier Island Systems in Polar, Temperate and Tropical Environments

**Brian Morgan** Evolution of the modern geomorphology of the island of Oahu

**Amelia Pludow** Geomorphic Effects of Southern California Wildfires

**Peter Reiley** Chatham, Massachusetts: Dynamism and Disaster

**Kody Spencer** Tropical Geology and Coastal Processes: Tahiti and Bora Bora Compared

**Justin Sperry** Stream-flow parameters and coarse (> 1 cm) bedload characteristics

**Levin Zars** The Glacial Record and Fluvial Terraces of the Teton Range, Wyoming

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Questions 2-8 Will be found on the following pages

Note that these remaining questions are based on Google Earth imagery. **PLEASE** ask for help if anything is unclear to you in the images – these are admittedly not as sharp and crisp as real photos.
Select Any **FOUR** Of The Following Seven Question Sets

(40 points possible for each)

Please ensure that your responses address the questions asked. Note also that "discuss" means I am looking for a discussion of at least a paragraph in length, not a quick one-word or one-line response. Feel free to utilize sketches (diagrams) if you feel they can assist in presenting a clear response in any case.

2. This slightly oblique Google Earth image shows the Androscoggin River and U. S. Route 2 at Rumford Point, Maine. Discuss what has happened here and what will happen here in the long run, barring any human intervention.
3. The two Google Earth images shown below show stream drainage patterns in northern Alaska (vertical perspective) and western China (an oblique view). *Compare and contrast* these and discuss what they strongly suggest about the underlying geology.
4. This Google Earth oblique image shows an embayment in southern Chile, in South America. What is the origin of this bay; why is it so straight? Discuss the origins of all other significant features in the surrounding terrain, and why they exist in the form that they do.

5. Discuss the major features shown in the following image from northern California, and their probable origins.
6. The images below are of segments of the California [A] and Oregon [B] coasts, respectively. Describe all processes observable from the geologic evidence in one OR the other (not both!)
7. Describe and discuss **fully** the processes that are the most likely origin of all the pond basins shown in this area of unglaciated American farmland.

8. The following image is from Zion National Park in Utah. There are at least two major but unrelated geomorphic features shown in the central part of the image. Describe them and discuss their likely origins as landforms.