# 16A

2) Identify three sources of water that can become a stream. Precipitation, meltwater, springs, or may appear as a lake outlet streams

3. **Sketch** a typical stream from its source to its mouth. Label its source, mouth, and base level, and describe the stream gradient at three points along its length.

6. Which stream features make a stream impassable by large boats and ships? How do we sometimes solve these problems? Waterfalls and rapids make passage difficult; people build locks and canals around them

7- What is the main drawback to building levees along rivers that flood regularly? The river can no longer replenish the soils in its floodplain

8) Why are some streams intermittent? Some streams flow only during wet seasons, after thunderstorms, or in spring when mountain snows melt

# 16B

5) Describe the life phases of a typical small pond after it forms. Sediment begins to fill in the pond basin, plants invade the shoreline and shrink the diameter of the pond, the pond becomes swampy, then a bog, even enough plans and soil collect so that dry land emerges and all that is left a stream

6- What conditions can shorten the lifespan of a pond? Warming temperatures, drier climates, coastal development, natural eutrophication, eutrophication due to runoff or pollution

7) How is limnology similar to oceanography? How is it different? They use similar methods and instruments, but study the relationship of the lake to the surrounding environment

8) What property of water drives the seasonal thermal turnover in lakes? Downwelling, due to water sinking towards its freezing point

# Chapter Review Questions

8- Which American river has a tributary that is longer than the river itself? The Mississippi

14- What is **eutrophication** of a lake? When can this process become harmful to a lake? The addition of nutrients from runoff; this can be harmful when it is in large amounts from a polluting source, which will ruin the composition and clarity of the water—killing what is within

16 – What action of lakes produces the summertime thermocline? Waves which mix warm surface waters with cooler waters deeper below

# Vocabulary 16

Limnology

Eutrophication

Thermal turnover

Seiche

Source

Mouth

Stream gradient

Base level

Tributary

Stream system

Drainage basin

Divide

Meander

Perennial

Intermittent

Stream cross-section

Stream elevation profile