**Environmental Science Final Study Guide Part One**

**SOILS**

**Multiple Choice**

Leaching – when water picks up nutrients and minerals from the soil and carries them away

Earthworms – the intestines of the earth

Percolation – the downward movement of water in the soil

Topography – the hilliness, flatness or amount of slope of the land

To form one inch of soil it takes one hundred years

Time changes weathered parent material into subsoil and topsoil.

**True/False**

Climate and weather are not the same thing

There are more than three types of soil globally.

**Matching**

A horizon – topsoil layer

B horizon – subsoil layer

C horizon – transition area

O horizon – organic layer

R horizon – bedrock

You will need to use your soil triangle to find the type of soil for 10 questions.

**Matching**

Sand – soil particles that are 0.05 to 2 mm in diameter

Silt – soil particles between 0.002 to 0.05 mm in diameter

Clay – particles that are less than 0.002 mm in diameter

Soil contains:

5% organic matter

25% water

25% air

**Agriculture**

**Multiple Choice**

PA ranks first in the nation in the production of mushrooms

Farmers in industrialized countries have increased food production by increasing the amount of food produced per acre

PA is in the Northeast agricultural region of the US

When you buy food at the supermarket the farmer usually has received less than the price you paid for the food

No till farming helps preserve soil by planting seeds without breaking up and turning over topsoil.

Contour farming prevents erosion by planting across the slope of the land.

In strip cropping, farmers prevent soil loss by alternating row crops such as corn with low growing crops with fibrous roots, such as clover.

Terracing is a soil conservation method used on the steepest slopes.

The steel plow of the mid 1800’s made the tilling of the sod covered prairie soils of the Midwest easier.

Genetic engineering allows scientists to place desirable characteristics into crop plants and livestock.

The current world population is 8 billion.

The current US population is 300 million.

It takes between 3 to 10 pounds of grain to produce 1 pound of meat.

Developing countries have a diet rich in vegetation.

PA most important agricultural product is milk.

Mushrooms are grown mostly in the southeast.

Agricultural on arid land has been made possible by irrigation.

The largest aquifer in the world, the Ogallal aquifer is found in the US

Carmine is obtained from crushed insects.

The percentage of the world’s farm labor force from the US is 1%.

Agriculture developed about 10,000 years ago.

The agricultural technique devised by the Romans was irrigation.

The US produces 25% of the world’s beef and 15% of its grain, milk, and eggs.

A small farm is one that sells less than $250,000 worth of crops and/or livestock per year.

Feeding the animals is not a flaw in farming in developed countries.

For many years, production was the only stage in obtaining food.

Iodine is added to the salt to prevent thyroid problems.

Vitamin D is added to milk by passing the milk under ultraviolet light.

**Match**

Food and Fiber System – agriculture

Subsistence Farming – growing only enough food to support you and your family

Shifting cultivation – using one plot until the nutrients are depleted and then moving to another plot

Green Revolution – occurred in the 50’s and 60’s. Meant to allow developing countries to feed their own populations

Slash and Burn Agriculture – chopping down vegetation and setting it on fire where it lay

**True/False**

You should never pick and eat wild mushrooms

The US has the most efficient and productive agricultural system in the world.

The FDA does not require public disclosure of the ingredients in additives.

The Green Revolution was not successful in developed countries.

Humans can manufacture vitamin D by themselves.

The size of farms in the US has gone from 143 acres to 434 acres.

There are more corporate farms in the US than family operated farms.

**Watershed and Wetlands**

**Multiple Choice**

Evaporation – when the heat of the sun changes water from a liquid to a gas

Bed load – sand and gravel are a part of this

Rectangular drainage patterns – form when rocks in the area are broken by faults

Vegetation – decreases runoff and erosion

PA’s five major watersheds are the Ohio, Great Lakes, Susquehanna, Potomac, and Delaware Basins

Predators - catch and eat prey

First-order streams are homes to insects and small fish

Swamp – wetland in which trees and bushes are the dominant plants

A high concentration of nutrients in a river or stream can cause a decrease in oxygen levels

Wetlands are important buffer zones because they absorb runoff and prevent flooding

Urban wetlands aid in filtering pollutants from runoff.

Many of wetlands in the US have been lost as the result of urbanization and development.

Urban runoff can affect wetlands by increasing salinity.

Streamside forest buffers are important because they provide shade to regulate temperature.

Volcanic eruptions can affect a stream or river by increasing the water body’s turbidity and temperature.

The Potomac is not a major PA river.

Susquehanna is the largest watershed in PA.

A wetland is not a carnivorous plant farm.

Watershed quality in the US is generally good.

**Matching**

Emergents – cattails, arrowhead, sedges, and rushes

Floaters – water lilies and duckweed

Submergents – coontail and bladderwort

Larva – the young stage of insects

Brackish water – water that is less saline than ocean and more saline than river

**IPM**

**Multiple Choice**

An exotic organism may spread faster in an area it invades than in its native area because it has little or no competition in the new area.

In a healthy forest, natural predators keep potential pests in check.

Most exotic species that become pests in the US enter the country as the result of trade.

IPM uses synthetic chemical pesticides when other methods fail.

Synthetic chemical pesticides are the most common method of pest control.

Some pesticides pose a health risk in foods because they can form a toxic residue on the skins of fruits and vegetables.