

Name _____

Exam 2

Limnology

Biol 612

Fall 2000

1. Fill the blanks with a letter for one point each (15)

increased biomagnification_____	a) locally extinct
bioassessment _____	b) ability to resist changes in pH
psychrophilic _____	c) Silent Spring
alpha (α)diversity _____	d) not settled by gravity
extirpated _____	e) total dissolved salts
conductivity _____	f) increased lipid solubility
Lake Nyos _____	g) between habitat diversity
buffering capacity _____	h) catastrophic CO ₂ release
endocrine disruptors _____	i) requires cold
bioconcentration _____	j) within habitat diversity
bioaccumulation _____	k) pollution tolerance of individual species
chronic toxicity _____	l) feminized wildlife
Rachel Carson _____	m) the ability of a compound to move from water into an organism
colloidal _____	n) bioconcentration plus buildup from food
beta (β) diversity _____	o) long term exposure effects

2. Diagram the carbon cycle (as was done in class), oxic fluxes on top, anoxic on bottom, oxidized inorganic forms to the right (20).

3. Give the equations for photosynthesis and respiration (4).

4. Diagram the nitrogen cycle (as in class), oxic fluxes on top, anoxic on bottom, oxidized inorganic forms to the right (20).

5. What did Melody Kemp talk about in her lecture (6)?

6. Why did high sulfate water flowing into a Netherlands wetland lead to increased phosphorus availability, even though the inflowing water was low phosphorus (5)?

7. Why do very old lakes have a high diversity (5)?

8. Describe two invasions of aquatic habitats by non-native species. Include the source of the invasion and the effect it has on the native ecosystem (10).

9. Why are redox gradients “hot spots” of nutrient cycling in ecosystems (5)?

10. Diagram the photosynthesis-irradiance relationship with light on the x-axis and photosynthetic rate on the y-axis. Label P_{max} , compensation point, respiration, inhibition, and α (10).