Biology 4605/7220 Quiz #3b NAME_____
27 September 2005

1. Circle either I for Type I error or II for Type II error, in the following situations.

A radiologist mistakenly concludes that fluoroscopes are harmless I II

A 1970 visitor to Voisey's Bay concluded there were no mineral deposits I II
A major deposit of nickel was later discovered

An pharmacologist concludes that a new drug is effective. I II
Subsequent trials fail to confirm the initial results.

2. Calculate the two corresponding frequency distributions F(Q=k), RF(Q=k), and the corresponding relative frequency distribution RF(Q≤k) from the following cumulative frequency distribution F(Q≤k).

F(Q=k)	RF(Q=k)	F(Q≤k)	RF(Q≤k)
_____	_____	5	_____
_____	_____	10	_____
_____	_____	15	_____
_____	_____	20	_____

2. Write in exponents to show dimensions for the following quantities. The first example has been completed for you. The flux of the quantity Q has dimensions of $Q\ L^{-2}\ T^{-1}$

	M	L	T
Velocity	M^0	L^1	$T^{!1}$
Kinetic energy ($kg\ m^2\ s^{!2}$)	M	L	T
Downward flux of leaves (leaf biomass in kg)	M	L	T
Kinetic energy flux	M	L	T