

GS331 Oceanography Quiz 2 Study Guide

Key Words and Concepts

matter	turbidity	alkalinity
element	temp-density relations	stable isotope
compound	density	radioactive isotope
atom	weight density	O16, O18
nucleus	heat	global ice budget
proton	heat flow	Carbon isotopes
neutron	thermodynamic flux	superposition
electron	heat expansion	biogenic
atomic number	heat contraction	lithogenic
atomic mass	buoyant force	stratigraphy
average atomic mass	density-volume relations	isotope equilibrium
isotope	ice crystal structure	del O18
atomic charge balance	conduction	PDB
electron shells	convection	SMOW
valence electrons	radiation	paleothermometry
atomic bonding	evaporation	mollusks
octet rule	freezing	foraminifera
noble gases	sublimation	coral
ionic bonds	calorie	salinity vs. O18
covalent bonds	joule	temp vs. O18
electron filling	condensation	latitude vs. O18
ions	phase change	isotopic fractionation
cations	latent heat	"heavy water"
anions	pH defined	"light water"
physical states	calcium carbonate stability	glacial climate
solid	saturated vs. undersaturated	interglacial climate
liquid	ion solubility	ice sheet
gas	solvent	evaporation
molecular kinetic energy	solute	late Wisconsinan ice
heat capacity	ppm	global sea level
ice/water volume relation	ppt	eustatic sea level
fluid	ppb	deep sea drilling
capillary force	o/oo	O18 stratigraphy
bipolar water molecule	carbonic acid reaction	O18/O16 ratio
hydrogen bonds	carbonate dissolution	global correlation
EM spectrum	buffering capacity	radiometric dating
wavelength	CO ₂ -pressure-temp relations	insolation
amplitude	composition of seawater	sun spot
frequency	Na, Mg, Ca, etc. percentages	sun spot cycle
period	salinity	sun spot - climate response
albedo	specific conductivity	orbital forcing
refraction	temp-salinity-density relations	Milankovitch Theory
reflection	pycnocline	obliquity
energy absorption	thermocline	eccentricity
absorption vs. depth	halocline	precession

angle of earth tilt
orbital path
plane of ecliptic
perihelion
aphelion
equinox
solstice
frequency
time series
northern hemisphere
southern hemisphere
fall,winter,spring,summer
circular vs. elliptical path
glacial - cold/wet climate
polar cooling
solar influx
albedo
positive feedback

El Nino Concepts

climate change
storm impact
community model
tides
wave heights
storm wave
beach slope
summer beach
winter beach
longshore drift
littoral cell
trade winds
upwelling
south america
north america
ocean current
easterly winds
El Nino
La Nina
storm track
coastal erosion
wave activity
storm surge
sea surface temperatures

Lab Concepts and Skills

thermocline

surface layer
salinity
density
thermohaline circulation
surface temperatures
isotherms
upwelling
downwelling
Coriolis Effect
isohalines
Knudsen titration
conductivity
dilution
water mass
residence time
thermohaline circulation
isopycnals
temp-salinity diagram
water mixing
current
dynamic topography