

## CORS221 Module 3 Homework 2

Out: 2010 November 9

Due: 2010 November 16 9:30AM Pacific Standard Time

### 1. Multiple Choice

1. What is the solar incidence angle if you are standing on Earth's equator at noon on the northern spring equinox (March 21st, the first day of spring)?  
(a)  $-23.44^\circ$  (b)  $0^\circ$  (c)  $23.44^\circ$  (d)  $90^\circ$
2. What is the solar incidence angle in Moscow, Idaho at noon on the day of the northern spring equinox?  
(a)  $0^\circ$  (b)  $23.44^\circ$  (c)  $46.5^\circ$  (d)  $66.56^\circ$
3. What is the solar incidence angle on the equator at sunset on northern spring equinox?  
(a)  $-23.44^\circ$  (b)  $0^\circ$  (c)  $23.44^\circ$  (d)  $90^\circ$
4. What is the solar incidence angle in Moscow, Idaho at sunset on northern spring equinox?  
(a)  $0^\circ$  (b)  $23.44^\circ$  (c)  $46.5^\circ$  (d)  $90^\circ$
5. What is the solar incidence angle in Moscow, Idaho at noon on the day of the northern summer solstice (June 21st, the first day of summer)?  
(a)  $0^\circ$  (b)  $23^\circ$  (c)  $46.5^\circ$  (d)  $70^\circ$
6. What is the solar incidence angle in Moscow, Idaho at noon on the day of the northern winter solstice (December 21st, the first day of winter)?  
(a)  $0^\circ$  (b)  $23^\circ$  (c)  $46.5^\circ$  (d)  $70^\circ$
7. A piece of cross-bedded sandstone was probably deposited in what conditions:  
(a) desert (b) jungle (c) underwater (d) river mouth
8. When the global average temperature is high, the relative fraction of oxygen-18 ( $\delta^{18}\text{O}$ ) relative to that in cooler climates is:  
(a) higher (b) the same (c) lower (d) uncorrelated
9. The greenhouse gas that is emitted by volcanos and is thought to be involved with melting off a Snowball Earth event is:  
(a)  $\text{H}_2\text{O}$  (b)  $\text{CO}_2$  (c)  $\text{CH}_4$  (d)  $\text{NO}_2$
10. When was the last time that the Earth froze over?  
(a) 6 Gyr ago (b) 600 Myr ago (c) 60 Myr ago (d) 6 Myr ago

