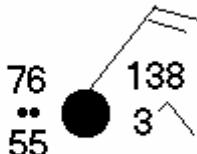


1. Is air generally rising or sinking at latitude 30° N? _____
2. What is the inferred pressure at a depth of 4,000 km below the surface of the Earth? _____
3. What is room temperature in degrees Kelvin (Kelvins)? _____
4. A stream has a source 800 ft above sea level and empties into a lake at an elevation of 300 ft. If the distance from the source to the lake is 20 miles, what is the average gradient of the stream?

Work:

Answer: _____

5. What is the approximate wavelength of the radiant energy given off by a heat source? _____
6. What is the minimum stream velocity necessary to transport the largest pebbles? _____
7. Refer to the station model below to answer the following:



- a. What is the air pressure here? _____
- b. What is the current air temperature here? _____
- c. What is the wind direction here? _____
- d. What is the current wind speed here? _____
- e. Convert the temperature and dewpoint temperature to $^{\circ}\text{C}$ $76^{\circ}\text{F} = \underline{\hspace{2cm}}^{\circ}\text{C}$ $55^{\circ}\text{F} = \underline{\hspace{2cm}}^{\circ}\text{C}$
- f. What is the relative humidity here? (use both charts on page 12!) _____
8. A location 5,600 km from the epicenter of an earthquake receives P-waves at 10:00 am. At approximately what time will the S-wave arrive? _____
9. What color of the visible light spectrum has the highest frequency? _____
10. What is the name of the New York State fossil? _____
11. Name a landscape region in which you might find the New York State fossil _____
12. How long ago did the Jurassic period end? _____
13. Determine the relative humidity of the air if the temperature is 6°C and wet-bulb temperature is 2°C .

14. What is the distance from Syracuse to Utica? _____ km _____ mi

15. What is the latitude and longitude of Utica to the nearest minute.

_____ , _____

16. What is the percentage of aluminum by mass in the Earth's crust? _____

17. What is the concentration of water vapor in the atmosphere at the tropopause? _____

18. A rock sample contains 5 grams of U-238 and 35 grams of Pb-206. What is the approximate age of the rock? _____

19. What is the composition of limestone? _____

20. Determine the length of the line below to the nearest tenth of a centimeter.

_____ Answer: _____

21. Does the North Equatorial Current have a warming or cooling effect on surrounding land masses?

22. Convert 29.5 inches of mercury into millibars. _____

23. During which geologic time period did the Catskill Delta form? _____

24. What is the average density of the Sun? _____

25. A student calculates the mass of an object to be 6.0 grams. The actual mass of the object is 6.4 grams. What is the percent error in the kid's calculation?

Work:

Answer _____

26. What type of rock is formed from the solidification of magma? _____

27. During which geologic time period was the bedrock surrounding Oswego formed? _____

28. Characterize the type of airmass represented by the symbol "mT".

_____ and _____

29. What is the eccentricity of an orbit having a major axis length of 100 million miles and a focal distance of 10 million miles?

30. Approximately how far below the Earth's surface does the outer core begin? _____

FINAL QUESTION: HOW OFTEN WILL YOU USE YOUR REFERENCE TABLES ON THE REGENTS EXAM????

1. sinking, descending. It is warm and dry as it reaches the earth's surface.
2. 2.4 million atmospheres
3. 293 Kelvins
4. $500\text{ft}/20\text{mi} = 25\text{ft}/\text{mi}$
5. 10^{-3} or 10^{-2} cm
6. 170 cm/s
- 7 a. 1013.8 mb
b. 76°F
c. NE (from the NE, to the SW)
d. 20 knots
e. $76^\circ\text{F} = 24 - 25^\circ\text{C}$ $55^\circ\text{F} = 13^\circ\text{C}$
f. about 50%
8. 10:07:15 AM
9. Violet / Blue
10. Eurypterus
11. Erie Ontario Lowlands, Hudson Mohawk Lowlands (Silurian age rocks)
12. 142 Ma
13. 46%
14. 74 km 46 mi
15. $43^\circ 06' \text{ N latitude}, 75^\circ 14' \text{ or } 15' \text{ W longitude}$
16. 8.23%
17. Ain't none at all! Zero, zip, nada!
18. $1.35 \times 10^{10} \text{ years}$ (3 half lives!)(the rock must be extraterrestrial!)
19. The mineral calcite, formula CaCO_3
- 20.
21. warming (it is a warm current!)
22. 999.0 mb
23. Devonian
24. 1.4 g/cm³
25. $= 0.4/6.0 = .0667 = 6.7\%$
26. Intrusive Igneous Rock
27. Ordovician
28. Warm and Moist, or Moist and Warm
29. $10 \text{ million}/100 \text{ million} = 0.1$
30. 2900 km