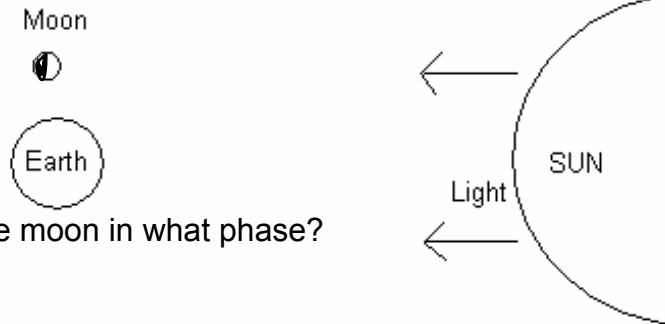ES 104　　　　　　Lab Quiz　　　　　　Name: _ Sample _____

DO NOT WRITE ON THIS SHEET.　USE THE SCANTRON FORM!
Lab 1

1. Note the shadowed side of Moon.

　　　This diagram shows the moon in what phase?
a) First quarter
b) full
c) third quarter
d) new
e) eclipse

2. With Moon in this position, it is (circle)
a) Waxing
b) Waning
c) at lunar eclipse
d) at solar eclipse
e) none of these answers

3. What is the time (in days) from full Moon to a new Moon?
a) 13 ⅔
b) 14
c) 14 ¾
d) 15
e) 29 ½

4. If the full moon is on the eastern horizon, what is the approximate time of day?
a) Sunrise
b) Noon
c) mid afternoon
d) Sunset
e) Midnight

5. When it is summer in Australia, what season is it in Oregon?
a) Spring
b) summer
c) fall
d) winter

e) depends what time of year it is

Lab 2

6. Compared to the outer planets, the inner planets are
   a) much closer to one another
   b) much further apart than the outer planets
   c) larger
   d) cooler
   e) none of these choices

7. How many Earth years go by before one Venus year has passed?
   a) 0.53
   b) 0.62
   c) 224.7
   d) 1.63
   e) 1.88

8. From its density, you can surmise Mars is composed mostly of
   a) rock
   b) ice
   c) gas
   d) a combination of ice and rock
   e) a combination of ice and gas

9. Which planet has a day length closest to Earth?
   a) Mercury
   b) Venus
   c) Mars
   d) Jupiter
   e) Saturn

10. Which planet has lowest surface pressure?
    a) Mercury
    b) Venus
    c) Mars
    d) Jupiter
    e) Saturn

Lab 3

11. If you know velocity (speed) and distance, t=time can be calculated with the following equation.
    a) t=vd
    b) t=v/d
    c) t=d/v
    d) v=dt

e) v=t/d

12. If the speed of sound is 350 m/s, and there is a 10 second round-trip sound travel time, how far away is the object that the sound is reflecting from? (calculate, and show equation)

   a) 17.5 m
   b) 35 m
   c) 175 m
   d) 350 m
   e) 3500 m

   OOPS 1750 m= $\dfrac{10s}{2} \times \dfrac{350m}{s}$

13. The wavelength of yellow light is about
   a) 750-640 nanometers
   b) 500-440 nanometers
   c) 400-360 nanometers
   d) 4500-4000 angstroms
   e) 6000-5600 angstroms

14. The speed of light is approximately
   a) 93,000,000 meters per second
   b) 150,000,000 kilometers per second
   c) 3,000,000 meters per second
   d) 300,000,000 meters per second
   e) 8.33 light years

15. Ultraviolet light is invisible because
   a) it has wavelengths longer than visible light
   b) it has wavelengths shorter than visible light
   c) it is traveling faster than visible light
   d) it is traveling slower than visible light
   e) it has a lower frequency than visible light.

Lab 4

16. asthenosphere	a. destruction of lithosphere
17. convergent boundary	b. easily deformed
18. divergent boundary	c. shallow earthquakes
19. lithosphere	d. strongest earthquakes
20. transform boundary	e. upper mantle and crust

(It doesn't day "Matching" so not all responses are used…and one is used twice.)

21. What type of plate boundary affects the Pacific Northwest?

a. Convergent mostly   b. Divergent   c. Transform
d. All of the above   e. Starbucks

22. Hawaii was created
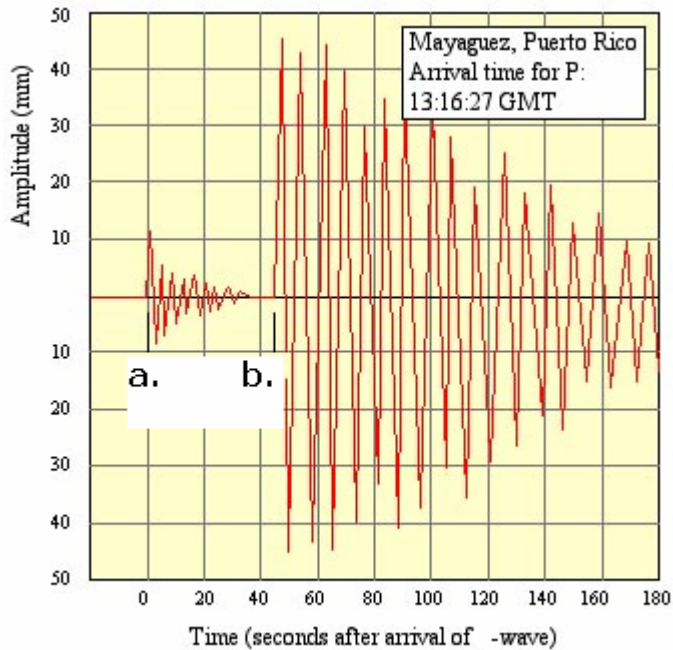   a. By a mantle plume   b. 65 million years ago   c. By Elvis Presley
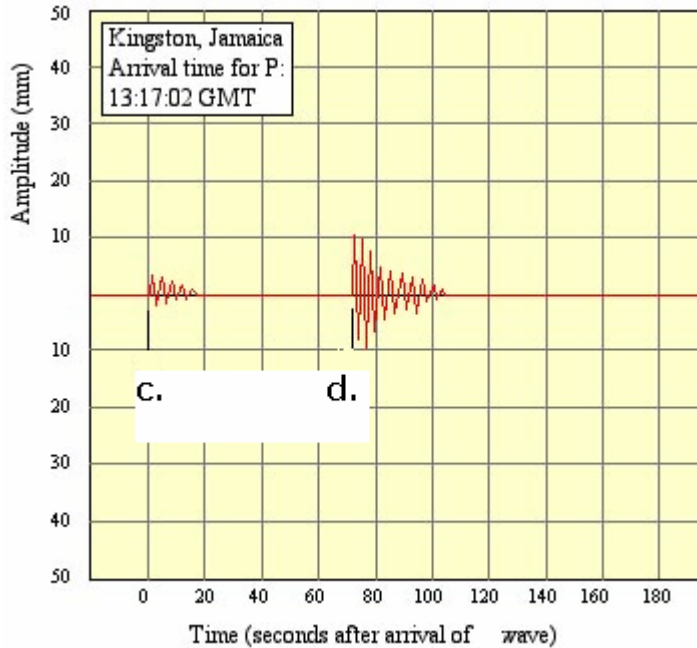   d. Before Midway Island   e. 758 miles from Suiko
23. What is the rate of movement shown by the rocks along the San Andreas
    Fault
    a. 25 million years
    b. 8 cm
    c. 3 inches
    d. About 1.5 cm/year
    e. About 4.2 inches per year

Lab 5

Use these seismograms and your time-travel curve for P-waves and S-waves
(figures 2 and 3) on pages 5-4 and 5-5 of lab 5 to answer questions 5.1
through 5.4, on the following page

Mayaguez, Puerto Rico
Arrival time for P:
13:16:27 GMT

a.   b.

Time (seconds after arrival of -wave)

The graph shows amplitude (mm) versus time (seconds after arrival of wave). Title box reads: "Kingston, Jamaica / Arrival time for P: 13:17:02 GMT". Labels c. and d. are marked on the diagram.

(http://www.appstate.edu/~abbottrn/e-quake/pt2-qk.html)

24. The P wave arrival at Kingston is:
      choose letter in diagram or e. none of those

25. The S wave at Mayaguez is
      choose letter in diagram or e. none of those

26. The time between P and S wave at Mayaguez is:
      a.   0 seconds
      b.   70 seconds
      c.   45 seconds
      d.   110 seconds
      e.   2 minutes

27. The distance from the earthquake to Mayaguez is
      a.   20 miles
      b.   30 miles
      c.   200 miles
      d.   300 miles
      e.   500 miles

Use maps of Lab 5 activities (on table) if they will be helpful for 5.5 and 5.6
28. The greatest liquefaction hazard exists
      a.   Closer to the river
      b.   in West Salem
      c.   On the top of Salem Heights
      d.   At Fairview Hospital

e.   it is the same in all these places

29. What information would be useful in determining a location to build a home?
   a.   Liquefaction potential
   b.   Landslide susceptibility
   c.   Type of bedrock
   d.   All of these
   e.   None of these

Lab 6
See mineral sample A provided to answer questions 6.1 through 6.4

30. The luster of this sample is
   a.   Metallic—gray
   b.   Metallic—yellow
   c.   Glassy—light
   d.   Glassy—dark
   e.   Dull

31. If the mineral sample has a volume of 200 cm^3 and a mass of 1500 grams, its density is
   a. $0.33 cm^3/g$
   b. $0.133 g/cm^3$
   c. $7.5 cm^3/g$
   d. $7.5 g/cm^3$
   e. $1.33 g/cm^3$

32. The mineral's cleavage is
a. 1 direction, perfect
b. 2 directions at $60°$
c. 2 directions at $90°$
d. 3 directions at $60°$
e. 3 directions at $90°$

33. This mineral is
   a.   Augite
   b.   Plagioclase
   c.   Galena
   d.   Biotite
   e.   Muscovite

34. What physical properties allow you to distinguish one feldspar from another?
   a.   Angle between cleavage planes
   b.   Color, if it is pink or gray
   c.   Color, if it is white

        d.   Striations on cleavage surface, if present
        e.   Either b or d, if present

Lab 7
See sample R provided to answer question

35. Which term best describes the texture of the rock sample?
    a. Fine-grained
    b. Glassy
    c. Coarse-grained
    d. Porphyritic
    e. Pegmatitic

36. What mineral would you expect to find in a gabbro?
    a. Quartz
    b. Muscovite
    c. Biotite
    d. Potassium feldspar
    e. Plagioclase feldspar

37. What is the name of a rock with 15 mm phenocrysts   of potassium feldspar in a matrix of 2 mm crystals of quartz, potassium feldspar, plagioclase feldspar, and biotite?
    a. Porphyritic andesite
    b. Basalt
    c. Diorite
    d. Porphyritic granite
    e. Obsidian   37

38. The chemical composition of the rock described in question ~~20~~ is
    a. ultramafic
    b. Mafic
    c. Intermediate
    d. Felsic
    e. There is not enough information to determine this.

Lab 8
39. Look at the topographic profile of Mt. Rainier. What type of volcano is it?
    a) Cinder cone
    b) Composite cone
    c) Shield volcano
    d) Volcanic neck
    e) Fissure eruption flood lava

40. If you find andesite lava flows, what would be the typical type of volcano it came from?
    f) Cinder cone
    g) Composite cone
    h) Shield volcano