REG: Due Thurs. USE THIS TO STUDY FOR TAKS

TAKS PREP—REG

1. Transcription (TC) or Translation (TS)?

A. ____ When DNA is changed to mRNA
B. ____ When mRNA turns to tRNA
C. ____ After the genetic code enters the ribosomes
D. ____ Just before the genetic code leaves the nucleus
E. ____ When both molecules have uracil
F. ____ When one of the molecules has thymine

2. Define and give an example of each:
A) Conduction

B) Convection

C) Radiation.

3. Acids and Bases:
A) What is an acid?

B) What is the range of acids?

C) What is a base?

D) What is the range of bases?

E) When you mix acids and bases you get?

F) To make a solution have a lower pH you add a:

G) To make a solution have a higher pH you add a:

4. You need a pH of 6.5, but currently your solution has a pH of 4.5. What do you add to your solution to get the desired pH?

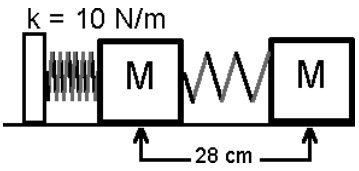
5. Give the units for the following physics quantities:

A. ____ force
B. ____ power
C. ____ energy
D. ____ velocity
E. ____ distance
F. ____ time
G. ____ acceleration
H. ____ Work
I. ____ Mech. Advantage
J. ____ Kinetic Energy
K. ____ wavelength
L. ____ Potential energy

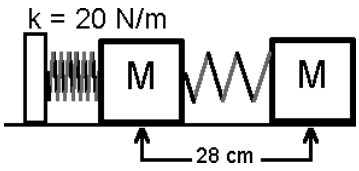
6. When you put your hand next to (but not touching) a warm wall at night, the warmth of the wall is transferred to your hand by:

7. How many variables do you change in a good experiment?

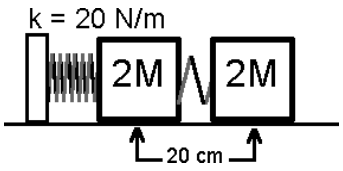
8. You are trying to decide whether or not heating a spring will change its strength. You take three springs and put mass on them as seen below. Then you apply heat to all three of them, with more heat put on spring A than B or C. Spring A is easier to pull than the others. What should be your conclusion about how heat affects springs?



Spring A



Spring B



Spring C

TAKS PREP 1—Reg

9. Types of Symbiosis:
   A) _____ A leech sucking on your arm:
   B) _____ Bacteria living in our stomach. The bacteria eats the food in the stomach and helps us digest the food.
   C) _____ A T-Rex chasing, capturing, and eating a Brontosaurus.
   D) _____ A barnacle living on the chin of a whale. The barnacle gets more access to food; the whale doesn't notice at all.

10. The above T-Rex eats meat, so we call it a _____
11. The above Brontosaurus eats plants so we call it a _____.

12. On the periodic table, give an element that will react like sulfur.

13. Give the balanced formula for an ionic compound made up of sodium (Na^{1+}) and oxygen (O^{2-}).

14. Physical or Chemical change?

A.____ When you chew up your food.
B. ____ When your stomach digests your food
C. ____ When you dissolve sugar into water.
D. ____ When ice melts.
E. ____ When rocks break due to ice forming in cracks (known as "weathering").
F. ____ Iron rusting.
G. ____ A substance put into water creates bubbles.

15. Choose the most appropriate organelle for the following.
   A. _____ contains the genetic code.
   B. _____ produces energy for the cell.
   C. _____ makes proteins for the cell.
   D. _____ protects the cell from the outside environment.
   E. _____ where photosynthesis occurs.

16. Respiration or photosynthesis $CO_2 + H_2O + \text{energy} \rightarrow C_6H_{12}O_6 + O_2$
   A) Does it breath oxygen or carbon dioxide?
   B) Does it give off oxygen or carbon dioxide?
   C) Is it a plant or an animal?
   D) Is it respiration or photosynthesis?