1. Physics Toss up multiple choice: Assuming g=10 m/s^2, what is the increase in gravitational potential energy resulting from moving an object with a mass of 5 kg 3 meters up?

W) 30 Joules

X) 50 Joules

Y) 100 Joules

Z) 150 Joules

Answer: Z

2. Chemistry toss up short answer:

What isotope is the scale for moles based on?

Answer: Carbon 12

3. Biology short answer: What is the name for the study of fish?  
answer: Ichthyology

4. Earth and space multiple choice: The mass of Pluto relative to the Earth is

W) less than .1%

X) between .1 and .5 %

Y) between .5& and 1%

Z) greater than 1%

Answer: X

5. Math short answer: What Greek letter is used to describe ordinal numbers?

Answer: w (omega)

6. Physics toss up multiple choice: If the velocity of a rotating object is doubled, its angular momentum

W) is decreased by a factor of 2

X) stays the same

Y) is increased by a factor of 2

Z) is increased by a factor of 4

7. Chemistry toss up short answer: How many valence electrons are in the element Nitrogen?

Answer: 5

8. Biology toss up short answer: What are the names of the four types of nucleotides in DNA?

Answer: Adenine, cytosine, guanine, and thymine

9. Earth and Space toss up short answer: What is the largest element which is produced by fusion inside of a star?

Answer: Iron

10. Math toss up short answer: Find the slant height of an cone with its area of base 25 pi and height 12

Answer: 13  
11. Physics toss up short answer: What feature of water allows water striders to remain on top of it without sinking inward?

Answer: water tension

12. Chemistry toss up short answer: What is the freezing point of water in Kelvin to the nearest whole number?

Answer: 273 Kelvin

13. Biology toss up short answer: What color is the algae Rodophyta?

Answer: red

14. Earth and space toss up short answer: Which planet is the first gas giant?  
answer: Jupiter

15. Math toss up short answer An object is expanded so that its surface area is increased by a factor of 64. By what factor is its volume increased?

Answer: 512

16. Physics toss up short answer: The time of an impact and the change in momentum of the object during the impact are both doubled. What is the impulse during the impact relative to the first collision?

W) ¼

X) 1

Y) 2

Z) 4

Answer: Y

17. Chemistry toss up Multiple Choice: In Scientific notation, what is the numerical value of the prefix nano?

W) 1x10^-6

X) 1x10^-9

Y) 1x10^-12

Z) 1x10^-15

Answer: Y

18. Biology toss up short answer: Approximately how many genes are located in the nucleus of all human cells?  
Answer: 100,000

19. Earth and space toss up short answer: What type of galaxy is the Milky Way?

Answer: Spiral

20. Math toss up short answer: Find the area under the curve between 0 and 10 pi of sin(x)

Answer: 0

21. Physics toss up short answer Which law of thermodynamics states that if two systems are in equilibrium with a third system, then these two systems must also be in equilibrium?  
answer: 0th

22. Chemistry toss up short answer: Which two elements are liquid at room temperature?

Answer: Bromine and mercury

23. Biology toss up short answer: Which are the two main types of cells?

Answer: eukaryotes and prokaryotes

24. Earth and space toss up short answer: About how many times farther from the sun is Jupiter than the earth?

Answer: 5

25. Math short answer: Find the remainder when 2 to the hundredth power is divided by 7

Answer: 2

26. Does the set of all sets that don’t contain themselves contain itself?

Answer: ?