**KONICHEK SCIENCE MATTERS MIDTERM REVIEW**

1. Which one would not be part of the scientific method?

 **Constructing accurate models**

2. The SI units of measure is nice because:

 **based on 10 universal between scientist decimal moves**

3. In the metric system the unit used to express volume is:**liter**

4. Scientific theories can be changed when:

 **new discoveries are made**

5. Scientist test a hypothesis by:

 **doing experiments**

6.Physical science involves the study of: **chemistry and physics**

7. Marie is 123cm tall. Her height in meters is? **1.23m**

8. Convert 300,000,000 to scientific notation: 3x108

9. What piece of safety equipment would be used to clean up acid spilled on the body? **shower**

10. Express the following number in correct decimal form **9.8x106**

11. For scientific theories to be valid it must allow you to: make predictions

12. What is the SI prefix for a thousand? **1000**

13. The major reason for scientific notation is**: allows big and small numbers to worked with easily**

14. Speed depends upon which two quantities? **Distance and time**

15. A Car travels 500km in 10 hours. What is the cars velocity?

 **500/10**

16. Average speed involves which quantities? **Total distance and total time**

17. A family travels 600km and takes a break. Then travels another 400km to their destination. The total time for the trip was ten hours. What is the average speed? 600+400/10

18. The quantities which velocity deals with are: **speed, direction, distance**

18. A cars velocity from a stop goes to 20m/s in 15 seconds. What would be its acceleration? **20-0/15**

20. A negative acceleration would commonly be called a:

 **deceleration**

21. The law of conservation of momentum states:

 **the total momentum of the system has to be zero**

22. In dealing with momentums the quantities which are involved are:

 **mass and velocity**

23. A parachutes main purpose is: **increase air resist decrease terminal vel**

24. A 600kg rock and a 50kg woman are falling off a cliff, assuming that each fall in a vacuum (VERY IDEAL). How much sooner would the rock strike the ground than the woman? **Same time**

25.Any change in velocity is referred to as: aceleration

26. Which equation would best show the conservation of momentum?

 **M1V1=M2V2**

27. All objects accelerate toward the earth at: **9.8m/s2**

28. Ball ONE has a mass of 60g. It strikes ball TWO, which has a mass of 30g. Describe the velocity of ball TWO **double of ball 1**

29. Knowing the acceleration of gravity (9.8M/S2)), what would be the final velocity of a falling object after falling for 3 seconds?

 **9.8m/s2 x3**

30. A person has moved 50m in .5 seconds what is their speed?

 **50m/.5s**

31. The difference between speed and velocity is that velocity includes**: DIRECTION**

32. Weight is best described as: **DOWNWARD FORCE OF GRAVITY**

33. When objects are moved farther apart from each other, the force of gravity: **DECREASES**

34. The unit of force is a: **NEWTON**

35.Which of Newton’s laws relates force and acceleration? **2ND**

36. The force, which the earth would pull 1 Kg of matter, would be?

 **1kgX9.8m/s2**

37. Air resistance is a form of; **FORCE AND FRICTION**

38. As the distance between masses increase the force will:

 **DECREASE BY THE INVERSE OF THE DISTANCE**

39. On the moon if a hammer and a feather are dropped, which would strike first? **SAME TIME**

40.The scientist would most likely describe a deceleration as:

 **NEGATIVE ACCELRATION**

41. A rocket is space applies its retro jets to turn; this is an example of which law of motion? **3RD LAW**

42. A conclusion is based upon **EXPERIMENT AND OBSERVATION**

43. If the mass of an object is 400Kg on the planet, and we take it to the moon that has a gravitational pull 1/6 of the earth. Its mass would be:

 4**00KG**

44. Which would show forces in equilibrium? **ROCK SITTING IN A CHAIR**

45. The tendency of matter being lazy was predicted by which of Newton's laws? **1ST**

46. Which would show forces not in equilibrium? **ALL OF THEM ARE NOT IN EQUILIBRUM**

47. The law of the conservation of energy: **APPLIES TO ALL FORMS OF ENERGY**

48.With which of the following is the weak nuclear force associated?

 **NUCLEAR DECAY**

 49.Which of the following universal forces is the weakest?

 **GRAVITY**

 50.As an astronaut travels far away from Earth, her weight

 **DECREASES BY THE SQUARE OF THE DISTANCE**

.51Property of matter that resists changes in motion is called

 **INERTIA**

52.An orange might roll off your cafeteria tray when you stop suddenly because of INERTIA

 53. According to Newton's second law of motion, the acceleration of an object equals the net force acting on the object divided by the objects

 **MASS**

54.The acceleration due to gravity on the surface of Mars is about one third the acceleration due to gravity on Earth's surface. The weight of a space probe on the surface of Mars is about: **1/3 AS MUCH**



**not going to do this for you**

 55. What is the speed of the object from 1 to 3?

 56. What is happening to motion between times 3 to 5?

 57. Time is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_variable and distance is the\_\_\_\_\_\_\_\_\_\_\_\_\_\_variable

58 The average speed of the object is: **TOTAL DIST/ TOTAL TIME**

59. When unbalanced forces act on an object, the result is:

 **MOTION**

60.What force is responsible for the repulsion between two positively charged particles? **ELECTROMAGNETIC**

**TRUE AND FALSE- a is true, b is false**

1. The approach humans use in studying events in the universe is critical thinking **F**

2. Themetric system is based on units of 10. **T**

3. Experiments become reliable when the results are repeatable **T**

4. Scientific notation is used by scientist just to make things complicated. **F**

5. A series if illogical steps to scientist use to solve problems is the scientific method **F**

6. The tested possible explanation of a natural event is a scientific law. **T**

7. Theories must explain observations clearly and simply. T

8. All motion is caused by a force **T**

9. Speed involves time and direction **F**

10. The universeas described by the teacher is all the matter, energy, space, and time. **T**

11. A model is a replica of the situations that occur in nature  **T**

12. The important tool scientist use to describe the universe is **mathematics T**

13. In Life Science zoology is the broadest classification F

14. Physical sciences involve the study of earthquakes and cloud formation **F**

15. The prefixes in the metric system tells which multiple of ten is being used **T**

16. Acceleration is velocity per unit time. **T**

17. Scientist never confer, fearing that someone will steal their ideas **F**

18. As mass increase the force to accelerate that mass must decrease **F**

19. The force, which opposes all motion, is set up by the weak nuclear force  **F**

20. The bar graph is the graph most often used in the scientific community F

**PROBLEMS: S=D/T V= D/T +dir A= VF –VI/T SA= DT/TT**

**F=Ma**

1. Jim has drove 500Km east in a period of 6 hours. His velocity was:

 **V= 500km/6hr E**

2. The total time for Joe to walk 52 miles was 14.7 hours, what was his average speed? **52mi/14.7hr**

 3.Kou is moving at 2m/s and he accelerates up to 15m/s in 7 seconds. What’s acceleration? **15m/s-2m/s/7s**

4. A mass of 5.7Kg is accelerated at 3.3m/s2 how much force does it take?

 **F= 5.7kg x 3.3m/s2**