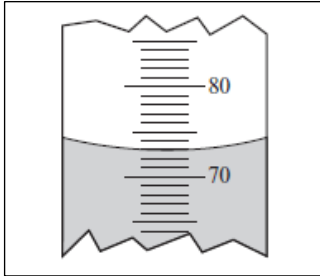
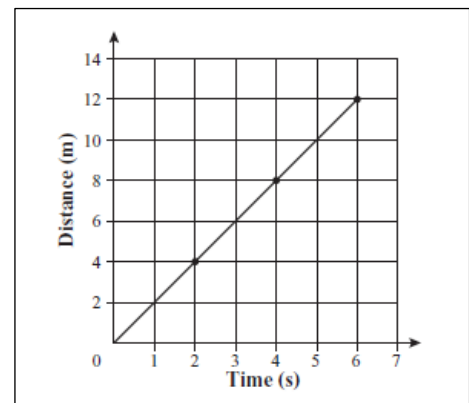


2018 – 19 TAME Middle School Divisional Practice Science Test

- (1) How many daylight hours do people in different places on Earth experience during an equinox?
A) 12 hours
B) 16 hours
C) 24 hours
D) 48 hours
- (2) Which of the following terms describes a variable that does **not** change in an experiment?
A) hypothesis
B) independent
C) dependent
D) constant
- (3) Which of the following is considered to **not** be a terrestrial planet?
A) Earth
B) Venus
C) Saturn
D) Mars
- (4) Which of the following groups of animal molts?
A) crustaceans
B) earthworms
C) humans
D) sea stars
- (5) The terms gas exchange, diaphragm, and inhale are **most** closely associated with which system in the human body?
A) circulatory
B) respiratory
C) excretory
D) digestive
- (6) The drawing to the right shows part of a graduated cylinder containing liquid. Based on the sensitivity of the graduated cylinder, what is the volume of the liquid?
- 
- A) 70.5 mL
B) 73.0 mL
C) 76.7 mL
D) 87.0 mL
- (7) Four rods of equal thickness but made of different metals were tested with equal amounts of weight to see which was most flexible. Which of the following is the **best** way to report the results of this experiment?
A) a list of each type of rod used
B) a sketch of each rod before testing
C) a table showing how much each rod weighed
D) a bar graph showing how much each rod bent
- (8) What are the chemical symbols for the two elements found in iron oxide?
A) I and O
B) Fe and O
C) I and Fe
D) Pb and O
- (9) What do the elements sulfur (S), nitrogen (N), phosphorus (P), and bromine (Br) have in common?
A) They are nonmetals.
B) They have the same density.
C) They have the same number of protons.
D) They have the same thermal conductivity.

- (10) The Moon orbits Earth at a speed of approximately one kilometer per second. The Moon is kept in orbit by which of the following?
 A) magnetic field
 B) lunar phases
 C) tidal forces
 D) gravity
- (11) As a sample of water turns to ice,
 A) the water sublimates.
 B) the mass of the sample is increased.
 C) the arrangement of the molecules changes.
 D) energy is absorbed by the molecules.
- (12) Which of the following is a harmful waste material that leaves the blood and travels through the lungs before leaving the body?
 A) NaCl
 B) CO₂
 C) CO
 D) O₂

- (13) The graph to the right relates distance to time for a rolling ball. What distance will the ball roll in 10 seconds?
 A) 2 meters
 B) 8 meters
 C) 12 meters
 D) 20 meters



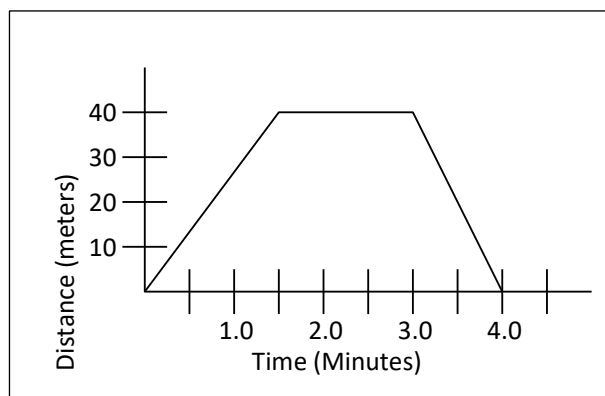
- (14) Which **best** describes a parallel circuit?
 A) Electricity flows along one pathway.
 B) The flow of electricity comes from one source.
 C) Electricity flows along more than one pathway.
 D) The flow of electricity comes from more than one source.
- (15) Which of the following biomes is **not** found in Texas?
 A) grassland
 B) tundra
 C) temperate deciduous forest
 D) temperate rain forest
- (16) In working with an acid in a laboratory, which of the following would be **least** useful in preventing getting hurt by the acid?
 A) eye glasses
 B) ear plugs
 C) apron
 D) gloves
- (17) Noah is walking toward the back of a bus at a velocity of 2 km/hr. The bus is traveling forward east at a velocity of 20 km/hr. What is Noah's velocity relative to the ground?
 A) 18 km/hour west
 B) 2 km/hour east
 C) 18 km/hour east
 D) 2 km/hour west
- (18) Almost 80% of a cell is
 A) Hydrogen.
 B) protein
 C) Oxygen.
 D) water

- (19) Which level of the food chain has the most energy?
A) producers
B) decomposers
C) herbivores
D) carnivores
- (20) What causes an object to accelerate?
A) Temperature
B) Friction
C) Net force
D) Momentum
- (21) The earth has seasons because
A) it only has one moon.
B) it is 78% covered by water.
C) it is the third planet from the sun.
D) it has an axis that is tilted as it moves around the sun.
- (22) What represents the total number of protons and neutrons of an atom?
A) isotope number
B) quantum number
C) mass number
D) atomic weight
- (23) Which of the following is **not** a step in the scientific method for acquiring knowledge?
A) Asking a question.
B) Analyzing the results of your testing.
C) Sticking to your theory no matter what.
D) Communicating the results of your observations.
- (24) How many bases make up the human DNA?
A) 1
B) 2
C) 3
D) 4
- (25) If you are driving along in a car with its windows closed, why does the air inside the car flow out the windows when the windows are slightly opened while the car is moving?
A) The calm air inside the car has more weight to push out.
B) The passing air causes a temperature difference making the air move.
C) The pressure outside the car becomes lower than the pressure inside the car.
D) The static charge build-up on the windows causes the positive air molecules to move.
- (26) A car, with a mass of 1000 kilogram, is stopped. Another car with a mass of 500 kilograms is traveling with a speed of 30 km/hour when it strikes the larger car and joins the bigger car in motion. Assuming momentum is conserved, how fast are the two cars traveling together?
A) 40 km/hour
B) 25 km/hour
C) 15 km/hour
D) 10 km/hour
- (27) In 2018 what is the name of the largest human habitat orbiting planet Earth?
A) International Space Station
B) Space lab
C) Soyuz
D) the Moon
- (28) Which of the following sets of organisms would be found in a wetland ecosystem?
A) salamander, mosquito, frog
B) coyote, lizard, prairie dog
C) tortoise, fly, lizard
D) wolf, caribou, horse

- (29) What is the kinetic energy of 12-kilogram box moving at a speed of 4 m/s?
A) 48 Joules
B) 30 Joules
C) 192 Joules
D) 96 Joules
- (30) To express the distance between any two cities in Texas, the most appropriate unit of measurement used is the
A) light-year.
B) meter.
C) astronomical unit.
D) kilometer.
- (31) An element that is a very reactive gas is most likely a member of the
A) halogens.
B) actinides.
C) noble gases.
D) alkali metals.
- (32) A student divides several cubes into two groups, based on whether each cube can float in water. What property is the student using to classify the cubes?
A) density
B) conductivity
C) weight
D) mass
- (33) The fourth planet away from our sun is
A) Venus.
B) Earth.
C) Jupiter.
D) Mars.
- (34) The jackrabbit population sometimes decreases dramatically. One possible explanation for this decrease is that the coyote population has increased. This explanation is a scientific
A) law.
B) conclusion.
C) hypothesis.
D) experiment.
- (35) The convergence of two continental plates would produce
A) rift valleys.
B) folded mountains.
C) island arcs.
D) trenches.
- (36) Stars begin their life-cycle in
A) a nova.
B) a supernova.
C) a black hole.
D) a nebula.
- (37) Which of the following organelles releases energy from sugars?
A) ribosomes
B) vacuoles
C) chloroplasts
D) mitochondria
- (38) If Elizabeth weighs 400 Newtons and lifts herself straight up 2 meters, how much does she increase her gravitational potential energy?
A) 800 Joules
B) 1600 Joules
C) 1200 Joules
D) 600 Joules
- (39) Which types of large clouds generally produce thunderstorms?
A) cirrus
B) cumulonimbus
C) stratus
D) nimbostratus

- (40) A student wishes to measure the mass of an object. Which instrument would be most useful?
 A) Digital timer
 B) Triple beam balance
 C) Graduated cylinder
 D) Erlenmeyer flask
- (41) An example of kinetic energy continuously being changed to potential energy and back again might be
 A) a child swinging on a swing.
 B) a train moving down a track.
 C) a plate sitting on the edge of a table.
 D) a car driving at a constant speed around a circle.
- (42) The amount of gravitational attraction between the Earth and an object depends on the object's distance from the Earth and the object's
 A) volume.
 B) mass.
 C) shape.
 D) state of matter.

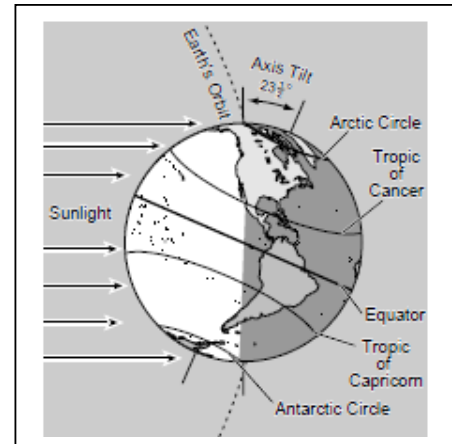
- (43) The graph to the right shows the progress of Wes as the school bell rings and he leaves class to go to another class. What was his average speed for the four minutes it took him to get to his next class?
 A) 100 meters/minute
 B) 2.0 meters/minute
 C) 20 meters/minute
 D) 10 meters/minute



- (44) Near Georgetown and some other parts of the world, water has carved vast caverns out of underground limestone deposits. Water, however, must contain dissolved carbon dioxide to break down the limestone. What role does the carbon dioxide play?
 A) It reduces viscosity, so the water flows more quickly.
 B) It supports the microscopic plant life that destroys the limestone.
 C) It raises the freezing point, so the underground water continues to flow all winter.
 D) In water, it forms an acid which reacts with limestone to produce a water-soluble substance.
- (45) If matter from Saturn would float in water, while matter from Earth would sink in water, which of the following is true?
 A) Saturn is smaller than Earth.
 B) Saturn has a lower density than Earth.
 C) Saturn is smaller than the sun.
 D) Saturn has a higher density than Earth.
- (46) Which of the following materials is composed of only one kind of atom?
 A) water
 B) air
 C) helium
 D) sugar
- (47) A student measured the mass of a piece of iron on a balance. The most sensitive beam was marked off in 0.1 g intervals. The student reported the iron's mass as 123.45 g. Which of the digits in the measurement is estimated?
 A) 1
 B) 2
 C) 4
 D) 5

(48) The model to the right shows the Earth's position relative to the sun. At the time of year shown by the model, the area receiving the most direct sunlight will be near the

- A) Arctic Circle.
- B) Equator.
- C) Tropic of Capricorn.
- D) Antarctic Circle.



(49) Because it can be transported easily and converted into other forms of energy, the energy form most commonly used in households is

- A) chemical.
- B) nuclear.
- C) electrical.
- D) photosynthetic.

(50) The presence of permafrost is a characteristic of which major biome?

- A) Tundra
- B) Grasslands
- C) Temperate forest
- D) Taiga

2018 – 2019 TAME Middle School Practice Divisional Science Test Answer Key

- | | | | |
|------|---|------|---|
| (1) | A | (26) | D |
| (2) | D | (27) | A |
| (3) | C | (28) | A |
| (4) | A | (29) | D |
| (5) | B | (30) | D |
| (6) | B | (31) | A |
| (7) | D | (32) | A |
| (8) | B | (33) | D |
| (9) | A | (34) | C |
| (10) | D | (35) | B |
| (11) | C | (36) | D |
| (12) | B | (37) | D |
| (13) | D | (38) | A |
| (14) | C | (39) | B |
| (15) | B | (40) | B |
| (16) | B | (41) | A |
| (17) | C | (42) | B |
| (18) | D | (43) | C |
| (19) | A | (44) | D |
| (20) | C | (45) | B |
| (21) | D | (46) | C |
| (22) | C | (47) | D |
| (23) | C | (48) | C |
| (24) | D | (49) | C |
| (25) | C | (50) | A |