Physics
Unit 1 Assessment

Date: _____
Name:_____

1. To describe motion it is essential to define:
   a) The moving object' size.
   b) The time interval.
   c) The starting point.
   d) A reference point.

2. Trajectory length of a moving object is known as:
   a) Displacement.
   b) Velocity.
   c) Distance.
   d) Graph.

3. Displacement is defined:
   a) The difference between starting and ending points.
   b) Trajectory length of a moving object.
   c) Distance per time unit.
   d) Direction and the velocity vector module.

4. The relation between displacement of a moving object and the time interval in which it occurs is called:
   a) Velocity.
   b) Distance.
   c) Speed.
   d) Trajectory.

5. Speed is the relation or change rate between:
   a) Displacement and time.
   b) Velocity and time.
   c) Distance and time.
   d) Trajectory and time.

6. Which of the following statements is not true for linear motion?
   a) The moving object covers equal distances in equal time intervals.
   b) The moving object velocity is variable.
   c) The moving object experiments equal displacements in equal time intervals.
   d) The moving object trajectory in a straight line.

7. If motion is linear and uniform, how is the position-time, x-t graph?
   a) A circumference.

b) A parabola.
c) A polygonal line.
d) A straight line.

8. The slope in the x-t graph physically corresponds to:
   a) Velocity.
   b) Trajectory.
   c) Speed.
   d) Position.

9. In an x-t graph, a negative slope represents motion in which:
   a) The moving object moves away from the origin or reference point.
   b) The moving object is in repose according to the reference point.
   c) The moving object is going downhill or descending on a leaning plane.
   d) The moving object is near the origin or reference point.

10. In an x-t graph a positive slope represents motion in which:
    a) The moving object moves away from the origin or reference point.
    b) The moving object is in repose according to the reference point.
    c) The moving object is going downhill or descending on a leaning plane.
    d) The moving object is near the origin or reference point.

11. In an x-t graph, a neutral slope represents motion in which:
    a) The moving object moves away from the origin or reference point.
    b) The moving object is in repose according to the reference point.
    c) The moving object is going downhill or descending on a leaning plane.
    d) The moving object is near the origin or reference point.

12. Acceleration is the rate of change between:
    a) Speed and time.
    b) Velocity and time.
    c) Distance and time.
    d) Trajectory and time.

13. From the following sentences regarding free fall, the only one which is true is:
    a) Free fall is a linear motion.
    b) In free fall velocity is constant.
    c) The time that it takes for objects to fall depends on their weight.
    d) The shape of objects that fall on Earth does not influence the falling time.

14. Who was the scientist who affirmed that all objects have a natural place where they belong and they will try to go back to it if they move away from it?
    a) Archimedes.
    b) Galileo.
    c) Newton.
    d) Aristotle.

15. Which is the position-time, x-t graph for a motion under constant acceleration?
    a) A semi-circumference.
    b) A semi-parabola.
    c) A semi-ellipse.
    d) A semi-straight.

16. In a velocity-time graph (v-t graph), a positive slope represents motion in which:
    a) The moving object has zero velocity.
    b) The moving object has constant acceleration.
    c) The moving object has zero acceleration.
    d) The moving object has constant deceleration.

17. In a velocity-time graph (v-t graph), a negative slope represents motion in which:
    a) The moving object is in repose.
    b) The moving object has constant acceleration.
    c) The moving object has zero acceleration.
    d) The moving object has constant deceleration.

18. In a velocity-time graph (v-t graph), a neutral slope represents motion in which:
    a) The moving object has a velocity equal to zero.
    b) The moving object has constant acceleration motion.
    c) The moving object has linear motion.
    d) The moving object has free falling motion.

19. If there is linear motion, how is the acceleration-time graph (a-t graph)?
    a) A horizontal, straight line that is on the time axis.
    b) A leaning straight line with a positive slope.
    c) A vertical straight line that is on the acceleration axis.
    d) A leaning straight line with a negative slope.

20. All of the following are scalars, except for:
    a) Time.
    b) Distance.
    c) Speed.
    d) Position.

Physics
Unit 1 Assessment Answer Key

1. d
2. c
3. a
4. a
5. c
6. b
7. d
8. a
9. d
10. a
11. b
12. b
13. a
14. d
15. b
16. b
17. d
18. c
19. a
20. d