

4. Quiz

Some questions might have more than one correct answer.

1. Base units for a system of units
 - (a) are all defined in terms of each other
 - (b) are defined in terms of standards
 - (c) are never replaced
 - (d) are used to derive all other units in the system
 - (e) are the smallest measurable values

2. In the SI system the base unit for time is related to
 - (a) the rotation of Earth on its axis
 - (b) the time for Earth to travel once around the sun
 - (c) the pulse rate of a standard person
 - (d) the speed of light
 - (e) an atomic clock

3. In the SI system of units the base unit for length is related to
 - (a) the length of a special bar of platinum-iridium
 - (b) the speed of light
 - (c) the length of Earth's orbit around the Sun
 - (d) the circumference of Earth
 - (e) the speed of standard bullet shot from a standard gun

4. In the SI system of units which of the following quantities does NOT have a derived unit?

- (a) weight
- (b) speed
- (c) acceleration
- (d) force
- (e) mass

5. Which of the following is NOT a unit of mass?

- (a) gram
- (b) kilogram
- (c) pound
- (d) slug
- (e) newtons/m

6. A kilosecond is about

- (a) 1 min
- (b) 17 min
- (c) 1 h
- (d) 5 h
- (e) 1 d

7. The area of the surface of a sphere is proportional to its radius

- (a) its radius
- (b) the square of its radius
- (c) the cube of its radius

- (d) the square root of its radius
- (e) none of the above
8. If all sides of a cube are doubled the volume of the cube will be
- (a) twice as great as before
- (b) four times as great as before
- (c) six times as great as before
- (d) eight times as great as before
- (e) the same as before
9. Volume has the dimensions of
- (a) length
- (b) length squared
- (c) length cubed
- (d) the square root of length
- (e) the cube root of length
10. The order of magnitude of a quantity is
- (a) the power of ten associated with its value
- (b) its size
- (c) its ranking in a list of similar quantities
- (d) the maximum possible value
- (e) the minimum possible value

Answers: (1) B, D; (2) E; (3) B; (4) E; (5) C; (6) B; (7) B; (8) D; (9) C; (10) A

