Introduction, Dimensions, and Units
Concept Questions

Question 1.

How many of the following statements do you consider to be true:

1. Mathematics is the language of physics and can be a source of factual knowledge.

2. The laws of physics are exact, definitive, and absolute.

3. The body of knowledge in physics is a collection of many directly perceived facts.

4. Aptitude is as (if not more) important than personal effort in learning physics.

5. The methods of science are situation specific.

a) 1
b) 2
c) 3
d) 4
e) 5
f) 0

Question 2.

Which of the following statements constitutes a scientific hypothesis?

1. Atoms are the smallest particles of matter that exist.
2. Space is permeated with a substance that is undetectable.

Question 3. What are the dimensions of energy?

1. $[L][T^{-2}]$

2. $[M][L][T^{-2}]$

3. $[M][L^2][T^{-2}]$

4. $[M][L^2][T^{-3}]$

5. None of the above.

Question 4. What are the SI units of power?

1.m/s^2

2.$kg\text{-}m/s^2$

3.$kg\text{-}m^2/s^2$

4.$kg\text{-}m^2/s^3$

5.None of the above

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