1) What is the value of acceleration due to gravity?
   a) 101.3 Nm\(^2\)
   b) 9.81 m/s\(^2\)
   c) 8.34 N/m\(^2\)
   d) 32.1 m/s

2) Weight is defined as a measure of:
   a) Force times acceleration due to gravity
   b) Mass times acceleration due to gravity
   c) Stress per unit area
   d) Stress per unit length

3) Stress is defined as a measure of:
   a) Force times area
   b) Force divided by area
   c) Elongation divided by time
   d) Elongation times force

4) Strain is defined as a measure of:
   a) Force times area squared
   b) Force divided by area squared
   c) Elongation per unit length
   d) Elongation divided by force

5) Which of the following physical parameters would change if you were on the surface of the moon?
   a) Weight
   b) Acceleration due to gravity
   c) Mass
   d) Density
   e) a & b
   f) All of the Above

6) “Young’s Modulus” is a measure of which material property?
   a) Temperature
   b) Density
   c) Stiffness
   d) Porosity
7) Shown below is a plot of stress vs. strain. Which material has the greatest Young’s Modulus?

![Graph showing stress vs. strain]

a) A  

b) B  

c) C  

d) D  

8) Given the plot of stress vs. strain, what is the Young’s Modulus of the material?

![Graph showing stress vs. strain]

a) 3 Pa  

b) 0.5 Pa  

c) 6 Pa  

d) 2 Pa
9) What monomer is contained in natural rubber?
   a) Styrene
   b) Butadiene
   c) Neoprene
   d) Isoprene

10) Which element is commonly used as a crosslinker in natural rubber production?
    a) Sulfur
    b) Phosphorous
    c) Boron
    d) Nitrogen