http://ccm.anest.ufl.edu/education/ultrasound

Even though air is impermeable to transmission, it shows a specific pattern on ultrasound, and this pattern's absence can be used to evaluate a host of disease processes, such as consolidations, fluid, interlobular septal thickening….

Name:

This is just the definition of frequency, important because all the probes are mainly characterized by frequency

Question		Answer
1		
5		

In short, this is a complex physical phenomenon, but its when crystals are deformed to produce vibrations, which then are processed by the machine, its the whole basis of how ultrasounds work

The higher the frequency the higher the resolution. This is again important to know , thats why the 'vascular' probes look with more detail

Essentially, as above, the higher the frequency the better the resolution, but the cost is the depth that you can view. This is why you can't use a vascular probe to see the abdominal structures, the beams won't go deep enough

1. In relationship to ultrasound imaging, air will:

A. Improve ultrasound transmission
B. By being a strong reflector, air will be impermeable to transmission
C. Have no effect on ultrasound transmission
D. Can not be used in lung ultrasound due to the air content in lungs

2. The number of cycles per second is the definition of

A. Wave speed
B. Frequency
C. Hertz
D. None of the above

3. Diagnostic ultrasound transducers are based on the physical principle of:

A. Murphy's law
B. ALARA principle
C. Doppler principle
D. Piezoelectric effect
E. None of the above

4. Axial resolution of ultrasound is primarily dependent on the:

A. Transducer frequency
B. Power
C. Frame rate
D. Beam width

5. Compared with a 2-MHz transducer, a 5-MHz transducer will have:

A. A deeper tissue penetration
B. A lower image resolution
C. No difference in depth penetration or image resolution
D. Both a better resolution image and a greater depth penetration
E. A better image resolution and a lower depth penetration