# Phys 212 Module 11 Baseline Quiz

Read sections 2.1 - 2.8 in Volume III of University Physics

1. What is required to form a real image of an object on a screen?
   a) Light incident on one point of the screen must come from one point on the object
   b) An aperture must be placed between the object and screen.
   c) A convex lens must be placed between the object and screen.
   d) A concave lens must be placed between the object and screen.
   e) None of the above.
2. Susie has her camera focused on an object
   a) Farther away
   b) It depends on the focal length of her camera lens
   c) Closer to
   d) The lens position will not change the focal distance
   e) None of the above.
3. An image produced by a thin convex lens has a magnification of -3.333. Which of the following statements must be true:
   a) The image is virtual.
   b) The image is larger than the object.
   c) The object is farther from the lens than the image.
   d) The ratio of the image height over the object height is equal to the ratio of the object distance over the image distance.
   e) None of the above.
4. Assume that the slide projector uses a single lens to project the slide. What type of lens does it use?
   a) It must be a concave lens.
   b) It could be a convex or concave lens depending on the focal length needed.
   c) It cannot use a lens to produce an image in front of the projector, it must be using a mirror.
   d) It must be a convex lens.
   e) None of the above.

5. A concave spherical mirror is used to create an image of an object. The image is located at the focal point of the lens, where is the object?
   a) It is located at the focal point.
   b) It is located at the surface of the mirror.
   c) It is located at infinity.
   d) None of the above.
6. Light rays from a point source located at the focal point of a convex lens will pass through the lens and:
   a) be parallel to each other and the optical axis.
   b) pass through the focal point on the other side of the lens.
   c) diverge from each other.
   d) converge to a point behind the focal point on the other side of the lens.
   e) None of the above.
7. A convex lens with a
   a) The image on the screen will completely disappear.
   b) An image of an object farther from the lens will appear.
   c) An image of an object closer to the lens will appear.
   d) The image will not change.
   e) None of the above.
8. What is an aperture?
   a) A special lens used in cameras.
   b) The distance between two lenses in a camera.
   c) A fancy name for hole.
   d) 1 over the focal length.
   e) None of the above.
9. If the refractive index of a convex lens is increased, what will happen to its focal length?
   a) It will get longer.
   b) It will get shorter.
   c) It will get will not change.
   d) None of the above.
10. What type of lens is used in a magnifying glass?
   a) Concave.
   b) Convex.
   c) A combination of convex and concave.
   d) None of the above.