

Semester Exam Review

1. History --Be able to identify the following:

camera obscura-first camera
photographic chemistry-
emulsion-
Johann Heinrich Schulze-
Carl Wilhelm Scheele-
Thomas Wedgewood-
Joseph Niepce-
heliography- "sun writing"
Louis Jacque Mande Daguerre
Daguerreotype
John Plumbé
William Henry Fox Talbot
John Frederick William Herschel
photography- "light writing"
Frederick Scott Archer
ambrotype
tintype
carte de visite
George Eastman
Kodak cameras
Mathew Brady-shot the civil war

2. parallax All cameras except SLRs and view cameras have viewfinders that are separate from the actual picture-taking lens. The distance may only be one or two inches, but it creates problems. You see one image through the viewfinder and the camera lens sees it at a slightly different angle. This increases as you get closer to the subject. This causes heads to be cut off in pictures!

How do some viewfinders counteract parallax? Some viewfinders are marked off with corners called parallax correction marks. The image you want should fall within those marks. Otherwise, the photographer must be aware of the problem and compensate for it by moving further away from the subject.

3. overexposure and underexposure

Overexposure results when too much light has been allowed to reach the film or paper

Underexposure occurs when too little light comes through.

Fogging is when unplanned light hits the negative or print.

4. aperture or F-stop- An adjustable opening made by a diaphragm inside the lens. The aperture has two main functions: it controls the amount of light that passes through the lens and determines the sharpness of the image from foreground to background (depth of field).

What is the **f-stop**? The different size aperture openings are the f-stops. The f-stop ring is located around the lens of the camera. It regulates the amount of light that passes through the lens and determines sharpness of the image from foreground to background. It is the same as aperture.

What are some **common f-stops**? 22, 16, 11, 8, 5.8, 4, 2.8, 2, and 1.4

How much more light is admitted by using f/2.8 instead of f/4? Twice as much.

5. shutter? A shield that uncovers the lens to allow light to strike film and then covers it to keep out the light.

What does the shutter control? Shutter controls the length of time the film is exposed to light and is the major factor determining whether moving subjects will appear sharp or blurred in a picture.

List the **shutter speeds** ordinarily found on today's cameras. 1,000, 500, 250, 125, 60, 30, 15, 8, 4, 2, 1, and B

How much more light is admitted by selecting 1/125 instead of 1/250? Twice as much light is admitted.

What is the B setting and how is it used?

The exception to shutter speed times is the **B setting**. It is a variable speed. Also known as "bulb" position. The shutter remains open for as long as the shutter-release button is depressed. This position is used only for long exposures.

What do faster-moving subjects require to "freeze" the action? They require faster shutter speeds.

How do you avoid blurred images caused by camera movement?

Blurred images are usually the result of camera movement during exposure. To minimize blurring, the camera should be held as steady as possible during the exposure by using tripod at shutter speeds of 1/60 and slower or keep arms against body (not in midair). The farther away a moving subject is from the camera, the slower the shutter speed needed to freeze its motion.

6. panning -Panning helps create the impression of speed or movement in a photograph, by tracking the movement of a subject by swinging the camera in the same direction as the subject. It allows you to make sharp images of very fast action subjects at relatively slow shutter speeds such as 1/30 or 1/60, although the background will probably be blurred.

7. depth of field The zone of apparent sharpness that extends ahead of and behind the subject on which the camera is being focused.

The smaller the aperture, the greater the depth of field.

What three factors determine depth of field?

1) lens aperture 2) distance to the subject 3) focal length of the lens

8. focal length The distance between the optical center of the lens, when focused at infinity, and the focal point, where the image is in focus in the camera. The film in the camera is positioned at the focal point, also known as the focal plane.

9. film speeds Speeds are expressed in terms of ISO, ASA, or DIN numbers.

These numbers appear on the film carton and on the cassette, cartridge, or backing paper.

The higher the speed, or ISO number, the more light sensitive or "faster" the film. The lower the speed, the less sensitive or "slower" the film.

10. Exposure

•A camera's shutter speed and lens opening are two ways it controls light.

•The length of time the shutter is open and the size of the lens opening control the amount of light to the film.

•The light meter measures the amount of light on the subject and tells you how to set the camera.

•A lens opening is also known as an aperture or f-stop.

•The amount of light going through the lens can be controlled by changing the size of the adjustable opening inside the lens.

- The larger the hole, the smaller the number.
- The timer that controls the shutter is set in fractions of a second.
- Changing to a different film speed changes the amount of light the film needs.
- Select a faster shutter speed to stop motion.
- Use a tripod when shooting at 1/60 or below.
- A smaller lens opening (larger depth of field) helps keep objects in front of and behind your subject in focus.
- A larger lens opening helps blur the area in front of and behind your subject.
- Depth of field is also known as depth of focus.

11. FILM & FILTERS

- What did photographers use prior to the invention of film?
- Every roll of film has at least how many layers? What are they?
- The _____ the speed or ASA number, the _____ sensitive it is to light.
- Why do we say a photograph is grainy?
- What factors contribute to graininess?
- What is a filter and how is it used?
- What is the most popular filter and how is it used?
- What are three groups of filters for black and white papers?
- How is a contrast filter used?
- What do polarizing filters do? How are they effective when photographing water, glass or most other shiny surfaces?
- What is a filter factor?
- Where is the place to keep film in a car?
- How can you avoid x-rays ruining film in air travel?
- Why should you pay careful attention to the expiration date on film?

12. LIGHT

- What are the pictorial qualities of natural light?
- Describe direct lighting or frontlight.
- What sort of day outdoors can be described as having direct-diffused light?
- Describe diffused light.
- Describe silhouette.
- How can light be added to a scene?
- What is existing light photography?
- What two equipment items are needed for existing light photography?
- What is a cable release?
- What is bracketing?
- What can be a problem in existing light photography since you are using a film with a high ASA number?
- Where is it best to focus in photographing people in existing light?

13. Printmaking and Composition

- Using this technique will darken an area of a print by blocking out the rest of the picture.-- burning in
- This technique is not necessary if you composed the image carefully in the camera's viewfinder.-- cropping
- The process of lightening an area on a print is --dodging
- What three steps should you take before making a print from a negative?
 - clean negative,
 - put negative shiny side up,
 - open aperture,
 - check size (by changing height of enlarger),
 - focus,
 - make a test strip
- What chemicals are in the three processing trays found in the darkroom? developer, stop bath (water) fixer
- Explain the rule of thirds of composition?
- List three angles at which you can take a picture for composition. high, low, level
- List three types of lighting. back light, side and front (direct)
- If fixer happens to get into the developer, it contaminates it
- The instrument for moving prints from one tray to another is tongs.
- Adding extra exposure time to an area to make it darker is burning in
- The device for increasing the size of a negative being projected is enlarger
- The device that holds the negatives in the enlarger is negative carrier.
- The box used to store unused photographic paper is the paper safe
- The best lens openings for the enlarger is 8 or 11
- The device for holding the photographic paper flat during exposure is the easel.
- The darkroom should be illuminated by a safelight.
- The size of the image projected by the enlarger is controlled by height of enlarger.
- The image brightness is controlled by aperture.
- The device to control the amount of exposure is timer.
- The smaller an image, the more sharpness it has.
- What is a contact print? a print where the negative touches the paper
- What is a contact sheet? a copy of all of your negatives
- How do you prevent:
 - a. Out of focus prints? focus before you print and print only those that are in good focus
 - b. Prints from becoming too dark or too light in developer? do a test strip
 - c. White fingerprints? Keep your hands clean and dry
 - d. Muddy prints? leave print in developer for full 60-90 seconds
 - e. Uneven development? agitate print in developer
- What is the difference between a positive and negative image? the whites are white and the blacks are black in a positive (it looks like the real thing)
the whites are black and the blacks are white in the negative
- What do you use polycontrast filters for? to add contrast-more black and white and less gray