

## 2019 PHOTOGRAPHY FINAL EXAM STUDY GUIDE

### •EXPOSURE FUNDAMENTALS

1. The earliest photographic techniques involved placing objects on photo paper and exposing it to light. The print created by this process is called a...
2. At the beginning of the year we used a very simple \_\_\_\_\_ camera made out of a converted salt can. This type of camera is an example of the earliest “primitive cameras,” and is essentially a lightproof container with a hole in the side and a “flap” to control the exposure.
3. If you compare the functions of those “primitive” cameras to the functions of the modern DSLRs, the hole in the side of the camera body is the same as the \_\_\_\_\_ and the “flap” is the same as the \_\_\_\_\_.
4. There are a variety of camera types available to the photographer, such as the view camera, the twin lens reflex, rangefinder, and mirrorless camera. The type of camera we are using is commonly referred to as a.....
5. What are the three variables of the Exposure Triangle?
6. What type of light meter is built into your camera?
7. The light meter in your camera gives you an overall reading of a scene and tells you the correct exposure settings for what % tonality?
8. If you point your camera at a snow bank and take a meter reading it will tell you the lens and shutter settings to expose your image for... (what tonality?)
9. Your camera’s overall meter readings are a good choice for what type of scene?
10. If you are shooting in a tricky lighting situation that is fooling the camera’s exposure meter, you can use the \_\_\_\_\_ to correct your exposure.
11. What are the 2 exposure controls that determine how much light strikes your camera’s digital imaging sensor?
12. What three-letter abbreviation is used to indicate the camera’s sensitivity to light?
13. Overexposing your digital image (giving it too much light) will cause the image to look too\_\_\_\_\_
14. When you change your lens opening from f5.6 to 22.... does more or less light hit your digital image sensor?
15. When you change your lens setting from f16 to 5.6... does more or less light hit your image sensor?

### •EXPOSURE FUNDAMENTALS •CAMERA CONTROLS

16. True or False? When using “AV” MODE on our digital DSLR -you pick the aperture, the camera picks the shutter speed for you.
17. True or False? When using “TV” MODE on our digital DSLR’s -you pick the aperture, the camera picks the shutter speed.
18. True or False? When using “M” MODE on our digital DSLR’s –The camera picks the aperture and the shutter speed for you.
19. True or False? When using “P” MODE on our digital DSLR’s -You pick the aperture and the shutter speed.
20. Which semi-automatic camera mode is the best choice if you are trying to shoot a photo with shallow depth of field?
21. Which the semi-automatic exposure mode is best for picking a fast shutter speed to shoot sports? On the back of the Canon T3i or T5, pushing and holding in the AV +/--button (indicated in the photo below) while turning the main dial on top of the camera, allows you to change the:



## •THE CAMERA SHUTTER

23. DSLRS have a \_\_\_\_\_ plane shutter.
24. The amount of time the shutter stays open is call the \_\_\_\_\_.
25. The shutter has two main functions. It controls \_\_\_\_\_ and it controls \_\_\_\_\_.
26. In low light you will need a \_\_\_\_\_ shutter speed.
27. In bright light you will need a \_\_\_\_\_ shutter speed.
28. True or False? A small lens opening, such as f/22 requires a slower shutter speed, because less light will travel through the hole in the lens.
29. True or false? If you set your camera to a high ISO, can you shoot at a faster shutter speed because your camera is more sensitive to light?
30. True of false? Setting your camera on AV is a good choice if you want to choose the shutter speed on your camera.
31. What are the four factors that determine how much movement is in your photo?
32. Do you need a faster, or slower, shutter speed to freeze a subject moving (sideways) across the image plane than a subject traveling towards the photographer.
33. A photo with all motion stopped is called a \_\_\_\_\_.
34. A photo with the background sharp, but the subject blurring through the image is called a \_\_\_\_\_.
35. A photo with the subject sharp, but the background blurring with motion streaks is called a \_\_\_\_\_.
36. When you are using a slow shutter speed, you can use an adjustable three-legged stand, called a \_\_\_\_\_, which will help you hold the camera steady.

## •THE LENS

37. True or False? Is the following statement true about the function of a camera lens? "The camera lens focuses light, it is one of the controls for exposure, & it determines depth of field."
38. A lens that has a focal length that is longer than a "normal" lens is considered a \_\_\_\_\_ lens.
39. A lens that has a focal length that is wider than a "normal" lens is called a \_\_\_\_\_ angle lens.
40. The term used to describe the **measurement of the size of the hole** in a lens is known as \_\_\_\_\_
41. Changing the f/stop on a lens from f/8 to f/5.6...
  - A. lets in  $\frac{1}{2}$  as much light into the lens.
  - B. lets in twice as much light into the lens.
42. True or false? Lenses are described in two ways, aperture size and focal length.
43. True or false? Lenses are often described according to their widest f/stop.
44. True or false? The focal length of a lens is measured in millimeters.
45. True or false? A long focal length lens, like a telephoto lens, gives you a wide angle of view.
46. True or false? Using a "normal" lens, like a 35mm on a crop sensor, camera or a 50mm on a full frame camera, allow you to view the scene as the human eye might see it.
47. True or false? One disadvantage of using a wide-angle lens is that it tends to distort whatever is closest to the lens.
48. True or false? Depth of field is another term for the angle of view in a photograph.
49. True or False? A large opening in your lens, such as f/2.8, gives you more depth of field than a small hole in your lens, such as f/22.
50. What are the four factors that determine the depth of field in an image?
51. Are the Canon cameras we use in our class full-frame cameras or crop sensor cameras?
52. Does moving closer to your subject give you deeper or shallower depth of field?
53. Does a telephoto lens give you deep, or shallow depth of field?
54. What is a macro lens used for?

## •UNDERSTANDING LIGHT & COLOR

55. Our current understanding of light comes from physicist James Maxwell. In the 19th century, he discovered that the forces of light, electricity and magnetism were all the same. The spectrum of energy described by Maxwell ranges from short wavelength energy, (such as cosmic rays, gamma rays, x-rays, uv rays), to long wavelength energy (infrared rays microwave & radio waves) and are all manifestations of the \_\_\_\_\_?

A. PHYSICAL SPECTRUM B. ELECTROMAGNETIC SPECTRUM C. RADIATION SPECTRUM

56. Our eyes are sensitive to a small portion of the spectrum of energy described above. This small portion of energy includes all colors of the rainbow and is known as the \_\_\_\_\_?

A. Additive Spectrum B. Visible Spectrum C. Cosmic Spectrum

57. Sir Isaac Newton studied the nature of color and light when he was 23 years old (the year 1666). Experimenting with prisms, he bent sunlight & transformed it into 7 colors: red, orange, yellow, green, blue, indigo and violet. During these experiments, he discovered that white light is the \_\_\_\_\_ of all colors of light....

58. During Newton's experiments with light, he also discovered that black is the \_\_\_\_\_ of light.

59. What are the two factors that determine the color of an object? One factor that determines the color is the type of light striking your subject. The color of light can range from "warm" to "cool" to "other" and is known in scientific terms as "\_\_\_\_\_".

60. A second factor that determines the color of an object is \_\_\_\_\_.

61. If an object reflects all the colors of the spectrum equally, then the object appears \_\_\_\_\_.

62. If an object absorbs all the colors of the spectrum, and reflects none, the object will appear \_\_\_\_\_.

63. If an object absorbs some colors of the spectrum, and reflects a particular color, the object will appear \_\_\_\_\_.

64. Mixing three primary colors of PIGMENT (CYAN, YELLOW AND MAGENTA) to create black is known as \_\_\_\_\_ (a.Additive color or b.Subtractive color)

65. Evenly mixing the three primary colors of LIGHT, (red, green & blue) to produce white light is known as... (a.Additive color or b.Subtractive color)

66. TO SUMMARIZE; THE 2 FACTORS THAT DETERMINE THE COLOR OF AN OBJECT ARE \_\_\_\_\_ and \_\_\_\_\_.

## •FLASH

67. Flash powder had advantages over available light photography, one is that the flash allowed photographers to speed up the image making process and to shoot in locations that were too \_\_\_\_\_.

68. Flash powder also had many disadvantages. One of the disadvantages of flash powder was that the light that was \_\_\_\_\_.

A) the wrong color temperature B) localized C) inconsistent D) diffused

69. Flash bulbs, which were invented & popularized in the 1930's, provided \_\_\_\_\_ with new opportunities for low-light.

70. Images shot with flash bulbs had a particular "look" characterized by a brightly lit \_\_\_\_\_ with hard \_\_\_\_\_ and dramatic "fall-off" of light around the edges and background.

a. foreground, background OR b. background, foreground

71. What is the name of the 1930's crime scene photographer whose gruesome photos of crime scenes in New York came to symbolize the "look" of powerful on-camera direct flash?

72. There was an evolution of using artificial light with photography, starting with \_\_\_\_\_, then flash \_\_\_\_\_ and finally \_\_\_\_\_.

73. There were disadvantages to using flash bulbs; the manufacturing technology was still not perfect, and the bulbs had \_\_\_\_\_ flash output.
74. The modern “Strobe” or “Flash” provides enormous advantages, or benefits, over previous flash bulb technology. One of the advantages of a strobe is that the light is...  
 a. consistent    b. inconsistent    c. bright
75. The Instantaneous output of a strobe, allows you to \_\_\_virtually any activity.
76. The modern “strobe” or “flash” also has some disadvantages. One of those is that strobe's burst of light is so \_\_\_\_\_ that it is impossible to tell what the lighting looks like.
77. When using the strobes in our studio, the lights are equipped with \_\_\_\_\_ lights to help you see what your lighting looks like.
78. Direct on-camera flash can be really ugly looking, similar to the light created by flash bulbs. It is characterized by hard \_\_\_\_\_light and hard background \_\_\_\_\_.
79. The flash and shutter are "synchronized " via an electrical connection called the flash synchronization, or flash “sync” speed. When shooting with your flash you can use a shutter speed that equals your camera’s flash sync speed or \_\_\_\_\_.
80. Shooting \_\_\_\_\_ than your flash synch speed will result in a portion of the image becoming black.
81. You have a choice of when the flash fires during the exposure. Most cameras are set to fire the flash as the beginning of the exposure. This is known as \_\_\_\_\_ curtain sync.
82. Some cameras allow you to change that setting, so that your flash fires at the \_\_\_\_\_ of the exposure. This is known as \_\_\_\_\_ flash sync.
83. You can experiment with your flash and slow shutter speeds. This technique allows the \_\_\_\_\_ to expose the subject and the slow shutter speed increases the \_\_\_\_\_ exposure.
84. You can use your camera's pop-up flash outside in a brightly lit area to lighten shadows on your subject. This technique is called \_\_\_\_\_.

## •Visual Literacy

This section will be similar to the Visual Literacy section of the Fall Semester Final Exam.

- In part one, you will be given a series of images and asked to identify the direction of light used in the photos.
- In part two you will be asked to identify the shutter speed used in the images.
- In part three you will be asked to identify the type of depth of field used in the photos.

## •Photoshop Toolbar

For this final section, I will provide you with images of the Photoshop toolbar and ask you to identify the function of specific tools (that we frequently use), such as: mover tool, crop tool, history brush tool, healing brush, lasso tool...