

Digital photography (PHN) - Intra exam

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Question 1 /1

Explain briefly what is focal length.

Ans: Focal length, usually represented in millimeters (mm), is the basic description of a

photographic lens. The longer the focal length, the narrower the angle of view and the

higher the magnification. The shorter the focal length, the wider the angle of view and the lower the magnification.

Question 2 /3

Identify correctly the following focal length as short, normal or long focal :

ANS:

20 mm : **Long focal**

50mm: Normal focal

300mm: short focal

Question 3

Briefly describe the following focal length's particularities.

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Ans: Short focal (wide angle) : Lenses with short focal lengths take on a broader angle of view and lower the magnification. Focal lengths with smaller numbers can show more of the scene, and make subjects appear smaller in the frame than they do to the human eyes.

Long focal : In photography, a long-focus lens is a camera lens which has a focal length that is longer than the diagonal measure of the film or sensor that receives its image. It is used to make distant objects appear magnified with magnification increasing as longer focal length lenses are used.

Zoom : A zoom lens is an SLR or DSLR lens that offers a different focal length for the photographer to select from. A zoom lens can be manually adjusted by a user to create focused images throughout a wide range of distances from one's photographic subject, from very close-up to very far away.

Question 4

/2

Which lens, between a 50 mm and a 500 mm, requires more light ?

Ans: First of all we can't give actually say which lens require more light . It completely depend on your shooting location and natural lighting.

But , theoretically 500 mm lens require more light than 50 mm.

2) a) The distortion or becoming zigzag of straight line is called as Pincushion distortion. It's in the name of the effect that staroght lines 'pinch' from the center of image. And the focal length is 200 mm. actually occurs at the end of zoom lens like 70-200mm.

b) In photography , the effect of becoming darker the corner than the center of photo is called as vignetting. It causes by various way. The most important cause is if we don't use a good filter .again if we think theoretically we get vignetting at 24mm to 45 mm. Again vignetting depends lots of stuff so we can't give exact focal length.

c) This effect will definitely happens all the time because of if we don't use camera angle correctly or if we change the perception of image and also if we use lens with less focal length so it will happen at 24 to 28mm.

Question 5

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Identify the correct focal length associated to each of the following possible side effect (perverse effect).

Distorsion (zig-zag) of normally straight perspective lines : 20mm.

Corner of the photograph darker than the center (vignetting) : 35mm.

Impression that there is less space (on the depth axis) between the elements (compression) : 46mm.

Exaggerated perspective : 50-60mm.

The illusion that there is water (on the ground) in the background part of the composition when a photo is made by a sunny day :

Question 6

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Which lens, between a 50 mm and a 500 mm, offers a larger depth of field ?

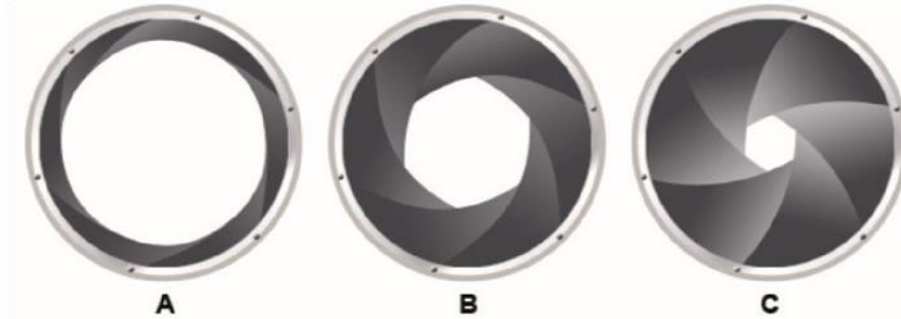
Ans: For larger depth of field we require 50mm lens because we take the subject of image as the same size but move backwards and zoom in so far this we require wide lens so we use 50mm.

/2

Question 7

Name the type of lens (and it is also a setting on cameras), make it possible for the photographer to shoot at a very short distance from its subject, allowing to reveal very tiny details otherwise not perceptible

Ans: A macro lens has the ability to focus from infinity to 1:1 magnification, meaning that the size of the image in real life is the same size as it's reproduced on the sensor. ... Macro lenses also allow for closer focusing distances than normal lenses and often require you to get very close to your subject.



Question 8

Referring to the images at the top of the page, write the letter (A, B or C) corresponding to the following aperture factor :

Ans: The aperture factor is :

f5.6 is of image C

F22 is of image A

Question 9

Referring to the same images, which aperture would offer the greater depth of field ? (Write A, B or C).

/2

Ans: C will offer a greater depth of feild, as when aperture size decreases the depth of feild increases.

Question 10

If your aperture is f5.6 and your camera indicates there isn't enough light, what other aperture could you use, for instance ?

Ans: We can use an aperture of f/1.4 or f/2.8 as when the aperture size decreases the light increases.

/2

Question 11

For each of the following type of shutter speed, give an example of speed in fraction of second (e.g. 1/30th).

Ans:

Normal shutter speed : **1/160**:

Fast shutter speed : **1/1000**

Slow shutter speed : **1/10**

/3

Question 12

/2

What would happen if you would take the picture of a moving object while using a slow shutter speed ?

Ans: If we take picture of moving object using slow shutter speed then it might happen that the image that we capture turns out to be blurry..

Question 13

/3

If your camera indicates too much light, and that you could only adjust the shutter speed, what could you do to rectify the situation ?

Ans: Shutter speed is responsible for two particular things: changing the brightness of your photo and creating dramatic effects by either freezing action or blurring motion. Shutter speed is the *length of time* the camera shutter is open, exposing light onto the camera sensor. If you use a long shutter speed, your camera sensor gathers a lot of light, and the resulting photo will be quite bright. By using a quick shutter speed, your camera sensor is only exposed to a small fraction of light, resulting in a darker photo.

Question 14

What is the purpose of the ISO adjustment and what side effect can it possibly produce ?

/2

Ans: In very basic terms, ISO is simply a camera setting that will brighten or darken a photo. As you increase your ISO number, your photos will grow progressively brighter. For that reason, ISO can help you capture images in darker environments, or be more flexible about your aperture and shutter speed settings.

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Fast ISO ratings definitely produce lower quality images. The faster the speed, the lower the quality produced. Other than that, the amount of noise will increase. Also be prepared to see less realistic colors and losses in overall sharpness.

/2

Question 15

What is overexposure ?

Ans: Overexposure :

If too much of light hits the film, or too much of light hitting the sensor in digital devices will lead to Overexposure. Overexposed images are very bright and seem to be washed out with less highlighting the details.

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Question 16

True or false ?

Ans: **TRUE**

/2

As a rule, we must always frame the subject being careful to cut it in the articulations (e.g. : knees, hips or neck). Circle your answer.

/1

/2

TRUE FALSE

Question 17

Fill the blanks.

Warmer is a light, more its color is ___Yellow_____. On the contrary, colder is a light, more its color is ___Blue_____.

Question 18

Using the Kelvin scale, what is the approximate daylight temperature ?

Ans: The following table shows the correlated colour temperature of common light sources:

Color Temperature	Light Source
1000-2000 K	Candlelight
2500-3500 K	Tungsten Bulb (household variety)
3000-4000 K	Sunrise/Sunset (clear sky)
4000-5000 K	Fluorescent Lamps
5000-5500 K	Electronic Flash
5000-6500 K	Daylight with Clear Sky (sun overhead)
6500-8000 K	Moderately Overcast Sky
9000-10000 K	Shade or Heavily Overcast Sky

Daylight has a spectrum similar to that of a black body with a correlated color temperature of 6500 K (D65 viewing standard) or 5500 K (daylight-balanced photographic film standard).

Question 19

What is the purpose of « white balance » ?

Ans: White balance (WB) is the process of removing unrealistic color casts, so that objects which appear white in person are rendered white in your photo. Proper camera white balance has to take into account the "color temperature" of a light source, which refers to the relative warmth or coolness of white light. Our eyes are very good at judging what is white under different light sources, but digital cameras often have great difficulty with auto white balance (AWB) — and can create unsightly blue, orange, or even green color casts. Understanding digital white balance can help you avoid these color casts, thereby improving your photos under a wider range of lighting conditions. White balance is a setting on your camera which is used to control how colors are captured in different types of light. When you correctly set your white balance, you are taking into account the "color temperature" of the light in your scene. Color temperatures range from cool (blue tint) to warm (orange tint). Using the right white balance setting will eliminate unwanted color casts that can ruin your image and make it appear unnatural. In this post, you will learn about white balance, and why it's important if you want to reproduce colors accurately in your images.

Question 20

What camera setting assures a correct white balance in most situations ?

Ans: White balance is a setting on your camera which is used to control how colors are captured in different types of light. ... Color temperatures range from cool (blue tint) to warm (orange tint). Using

the right white balance setting will eliminate unwanted color casts that can ruin your image and make it appear unnatural.

Most cameras default to the “Auto” white balance setting, which actually works pretty well, most of the time. In auto white balance mode, your camera examines the scene you're trying to photograph and chooses a color temperature (in Kelvin) it thinks will work best.

Question 21

What filter is commonly used in order to limit the amount of light entering the camera (some are gradient) ?

Ans: Circular screw-on filters – most common type that mounts directly on the lens filter thread. Examples of circular screw-on filters include UV/Clear/Haze filters, circular polarizers, neutral density and color filters. Circular filters also come in different thicknesses – some are thick that can potentially add vignetting, while others are ultra-thin to diminish vignetting, but make it impossible to put a lens cap.

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Question 22

What filter creates more contrast, concentrates colors and eliminates reflections (e.g. on a window) ?

Ans: On a Windows Reflections are often unwanted, and glare will wash out a picture/ image. The Polarizing filters counter the reflective measures and the polarizing filters will deepen blues and also add contrast to skies or reduce or remove reflections from windows, and also increase contrast and saturation.

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Question 23

What filter protects the lens and cuts ultraviolet rays ?

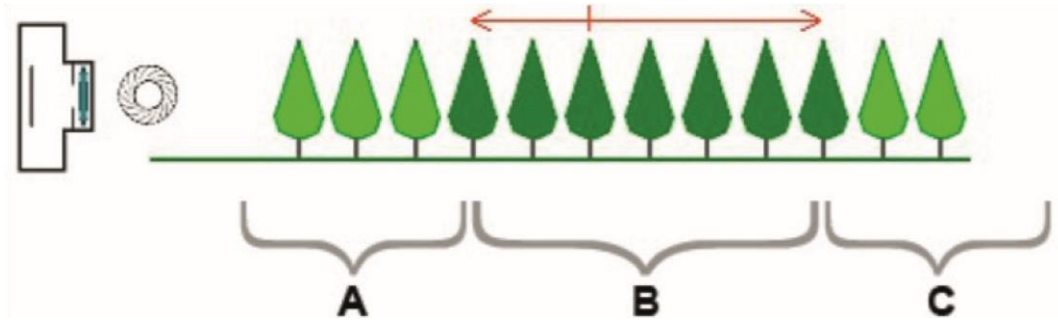
Ans: UV filter is the most common type of filter that protects the lens And block/cuts ultraviolet rays.

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Question 24

What is the worst moment of the day to take pictures outside?

Ans: The worst moment of the day to take pictures outside is before sunrise and after sunset.



Question 25

/2

Referring to the preceding image, identify the zone(s) of clarity.

Write A, B and/or C.

Ans: The zones of clarity are A and C.

Question 26

/2

Referring to the same image as question 25, identify the zone(s) which would be blurred (outfocused). Write A, B and/ or C.

Ans: The zone which would be blurred (outfocused) is B.

Question 27

/5

Briefly explain the interrelation between ISO, aperture, and shutter speed.

Ans: aperture is the process that happens when we open the lens, the smaller the aperture number = the bigger will be the aperture opening = the shallower the depth of field (more blur effect).

The higher the aperture number = the smaller will be the aperture opening = the deeper the depth of field (less blur effect).

Shutter speed is a part of the exposure triangle. Light enters the lens and passes through the aperture to create an image and lands on the film stock or digital sensor. A barrier known as the shutter.

The shutter's job is to block light from the sensor before shutting. The amount of time the shutter is open is known as a shutter speed. ISO is defined by the international organizations for standardization. ISO is used for the sensitivity of a camera's sensor rather than film.