

COM2235 – Photography – Lenses

Assignment #1

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This assignment will give you an understanding of the parts of a lens and the varying types of lenses available.

Part A

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In a Word or PowerPoint document, provide a definition (2 marks) and a picture (1 mark) of each of the following:

- 1) Lens
- 2) Filter threads
- 3) Focus ring
- 4) Focal length ring
- 5) Aperture ring
- 6) Aperture
- 7) Lens mount

Part B

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Continuing in the same document, provide a definition (2 marks) and a picture (1 mark) of each of the following lens types. You must also include the details of each lens you choose as your example (1 mark). Ex. Canon 18-135mm f/3.5-5.6 IS

- 1) Standard
- 2) Zoom
- 3) Telephoto
- 4) Wide angle
- 5) Fisheye
- 6) Macro
- 7) Teleconverter
- 8) Tilt shift

Cont.

Part C

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Various tools can be used to help stabilize a camera to help you get the perfect shot. One of these tools, called Image Stabilization, is a function of the camera or lens itself.

- 1) Define Image Stabilization and explain how it helps you achieve better results with your photos (3 marks)
- 2) Continuing in the same document, provide a definition (2 marks) and a picture (1 mark) of each of the following stabilization tools types. Also, identify a situation where each would be more useful than the others (1 mark).
 - a. Tripods
 - b. Monopods
 - c. Gorilla tape
 - d. Bean bags
 - e. Gaffer tape
 - f. Clamps

Part D

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Continuing in the same document, use a search engine to find answers to the following questions. Be specific and detailed in your responses.

- 1) How does a lens work? (5 marks)
- 2) What is focal length? (1 mark)
- 3) How does focal length affect image size? (1 mark)
- 4) What do the numbers associated with each lens mean? For example, in a Canon 18-135mm f3.5-5.6 IS lens, what does the 18 mean? What does the 135 mean? The 3.5? The 5.6? (4 marks)
- 5) Explain the function of the f-stop system.
 - a. How does aperture size affect your photos? (1 mark)
 - b. How does aperture size affect light transmission? (1 mark)
 - c. How does aperture control affect depth of field? (2 marks)
 - d. In what situation does aperture have a lesser effect on depth of field? (1 mark)
 - e. Briefly explain the relationship between aperture and shutter speed. (2 marks)
 - f. Describe a situation where you would want to use Aperture Priority mode to keep your aperture constant. (2 marks)
 - g. Describe a situation where you would want to use Shutter Priority mode to keep your shutter speed constant. (2 marks)
- 6) Finally identify 3 tips or techniques for keeping your camera and lenses clean and safe.