

Section A: True/False

Directions: Write True or False on the blanks provided; if false, write the correct statement on the lines provided.

1. _____ As part of thorough documentation, investigators should document the overall scene after making alterations. (229)

2. _____ Any potential evidence should be documented prior to collection. (229)

3. _____ Investigative field notes can also be used to provide an overview of the incident for fire department statistical records. (229)

4. _____ According to NFPA 921, a simple sketch is the only drawing fire investigators should develop as part of every investigation. (232)

5. _____ A sketch provides a graphical representation of the scene that is proportional and to scale. (232)

6. _____ Whatever method is used to produce field sketches of the scene, the investigator will have to use a reliable means of locating items on the sketch. (234)

7. _____ For incidents that affect large areas, maps can be used to depict weather conditions such as wind direction. (236)

-
8. _____ Most fire investigators are not responsible for taking their own photos while on the scene. (237)
- _____
- _____
9. _____ Investigators should begin photographing on the inside of the fire structure. (237)
- _____
- _____
10. _____ Digital single-lens reflex (DSLR) cameras are typically used for investigative photography. (239)
- _____
- _____
11. _____ The focal length of a lens describes the distance between the camera's sensor and the point that light converges to form a sharply focused image when the lens is set to infinity. (243)
- _____
- _____
12. _____ When using DSLR cameras, investigators should practice using manual settings in order to adapt to the various conditions found at scenes. (244)
- _____
- _____
13. _____ The diameter of the aperture opening increases as the f-stop increases. (245)
- _____
- _____
14. _____ The greater the depth of field, the more detail the photograph's viewer will see. (245)
- _____
- _____
15. _____ The higher the ISO rating of the film, the more sensitive it is to light. (245)
- _____
- _____
16. _____ A useful application of video is documenting interviews. (249)
- _____
- _____

Section B: Fill in the Blank

Directions: Write the correct answer on the blanks provided.

1. Proper documentation will ensure that the investigator has recorded the location, _____, and _____ associated with the identification and collection of the evidence. (229)
2. Professional field notes are accurate, _____, _____, and written in the format required by the authority having jurisdiction. (231)
3. A fire investigator using building plans for the basis of a drawing should verify the _____ of the plans. (235)
4. Any digital camera used by investigators should have _____ unit capability and sufficient resolution to produce an 8 × 10-inch (200 mm by 250 mm) print. (239)
5. Specialty cameras are capable of taking _____ images and use _____ to create a 3D model at the scene complete with a “dollhouse” type view. (242)
6. A special consideration when using DSLR cameras is _____. (244)
7. The _____ is the size of the opening in the camera lens that allows the light to pass through. (245)
8. The _____ of _____ is the range that is in focus in front of and behind the subject of the photograph. (246)

Section C: Picture Identification

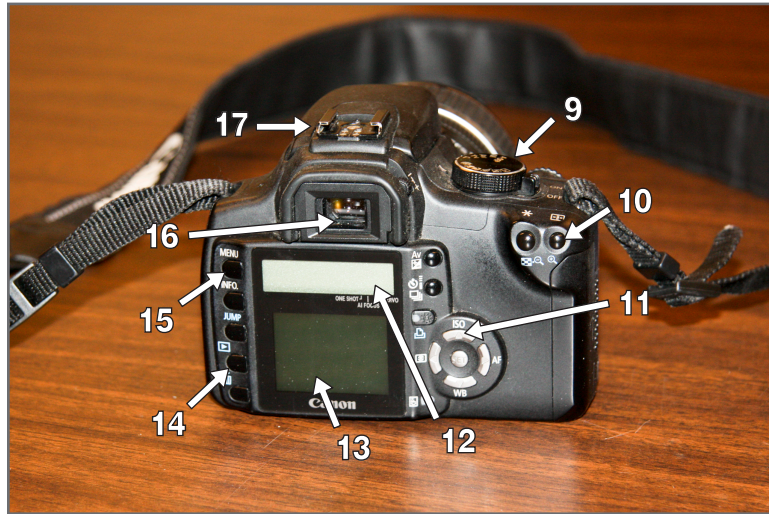
Digital single-lens reflex (DSLR) cameras

Identify DSLR cameras components in the images below. (240)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____



Section D: Matching

Directions: Write the correct answers on the blanks provided.

Part I: Depth of field

Match the factors that affect a photograph's depth of field with their descriptions.

Choices:

- A. Aperture opening
- B. Focal length
- C. Depth of field

Questions:

- _____ 1. The range that is in focus in front of and behind the subject of the photograph. (246)
- _____ 2. The size of the opening in the camera lens that allows the light to pass through. (245)
- _____ 3. Describes the distance between the camera's sensor and the point that light converges to form a sharply focused image when the lens is set to infinity. (243)

Section E: Multiple Choice

Directions: Write the correct answers on the blanks provided.

- _____ 1. What is a common method used to document the scene and support investigative findings? (229)
 - A. 3D mockups
 - B. Preincident plan
 - C. References books
 - D. Audio and visual recordings

-
- _____ 2. Investigative field notes assist the investigator in: (231)
- A. performing a post-incident critique.
 - B. developing the incident action plan.
 - C. recalling scene observations used to develop the final incident report.
 - D. providing background information to support the incident action plan.
- _____ 3. When an investigator takes notes on an electronic device such as a tablet, the app or software should be set to record the: (232)
- A. investigator's complete name.
 - B. fire scene geographical positioning.
 - C. location address and owner's name.
 - D. the date, time, and history of each entry.
- _____ 4. What item may be included in the investigator basic sketch? (234)
- A. Wind direction
 - B. Layout of the scene
 - C. Locations and positions of any fire apparatus
 - D. Locations of firefighters when observations were made
- _____ 5. What is a key consideration when developing sketches? (234)
- A. Keep them uncluttered
 - B. Use waterproof paper to prevent drawing damage
 - C. Use one sketch to show each specific piece of information
 - D. Use one sketch to show several pieces of relevant information
- _____ 6. Using high-quality equipment or computers to generate drawings, diagrams, or maps for the investigative report will only be successful if: (235)
- A. they are in color.
 - B. the computers and equipment used are of a recognized brand.
 - C. a fire investigator collects basic and general information during the scene examination.
 - D. a fire investigator collects details and accurate information during the scene examination.
- _____ 7. Fire investigators may consider creating a _____ diagram to show how they determined the hypothetical area of origin. (236)
- A. Venn
 - B. Block
 - C. Timing
 - D. Comparison

-
- _____ 8. Photograph broken glass beneath windows in order to show: (238)
- A. window treatments, curtains, or shades.
 - B. that you were thorough and diligent in your investigation.
 - C. the type of glass in the windows and where it was manufactured.
 - D. if the window has been broken due to mechanical force or from thermal effect.
- _____ 9. While sifting through debris and reconstructing the area of origin, the investigator should photograph: (239)
- A. each step.
 - B. every other step.
 - C. the before and after of the area of origin.
 - D. just the important pieces of debris found.
- _____ 10. In digital camera photography, what must be done to ensure a properly exposed image? (241)
- A. Install a professional flash at the fire scene
 - B. Make sure the light intensity is within 1000 lx (93 lm)
 - C. Make sure the light intensity is 1000 lx (93 lm) to 10,000 lx (9290 lm)
 - D. Control the timing of the exposure and size of the opening the light passes through
- _____ 11. The variations in the focal length of a lens determines the size of the image focused on the sensor and: (243)
- A. the length of the exposure.
 - B. the actual length or size of the lens itself.
 - C. the amount of light the sensor will capture.
 - D. the amount of the scene that is captured in the photograph.
- _____ 12. What is the most versatile lens a fire investigator can use? (244)
- A. Fisheye lens with automatic flash
 - B. Telephoto lens with infrared sensor
 - C. Wide angle lens with automatic focusing
 - D. Adjustable focal length zoom lens with macro (close-up) capability
- _____ 13. What does the camera shutter do? (244)
- A. Turn the flash on
 - B. Turn the camera on
 - C. Controls the aperture opening
 - D. Controls the amount of time the sensor is exposed to light

_____ 14. The detail of a fire-scene photograph is determined by: (246)

- A. the ISO settings.
- B. the shutter speed.
- C. the brand of the camera.
- D. the depth of field and focus.

_____ 15. A method used to reduce glare or reflection is _____ flash, in which the flash is directed at the ceiling above the subject and then the photo is taken. (247)

- A. faded
- B. direct
- C. bounce
- D. softbox

Section F: Short Answer

Directions: Write the correct answers on the lines provided.

1. Give four examples of details that should be included in documentation regarding each piece of evidence. (230)

2. List three items that should be included on each piece of evidence tag. (231)

3. List four guidelines to which a fire investigator must adhere when developing field notes. (221)

4. When photographing evidence in place, what are three guidelines to follow? (239)
