Name: _____
Class: _____

1. The following is not a method of forming rifling in a barrel.

   A. Electrochemical ☐
   B. hammer forged ☐
   C. machine cut ☐
   D. broach cut ☐
   E. button rifling ☐

---

2. The identification of fired bullets, cartridge cases or other ammunition components as having been fired from a specific firearm is referred to as:

   A. Forensic Ballistics ☐
   B. Ballistics ☐
   C. Ammunition Identification ☐
   D. Firearm Identification ☐
   E. Cartridge Identification ☐

---

3. Cartridges designed for use in auto loading pistols will usually have this word in their cartridge designation:

   A. Auto ☐
   B. Semi ☐
   C. Long ☐
   D. Caliber ☐
   E. S&W ☐

---

4. By holding the nose of the bullet pointing away from you, the direction the rifling impressions run _____ from you determines the direction of twist.

   A. away ☐
   B. parallel ☐
   C. toward ☐

---

5. Firearms identification is actually a form of _____ where the firearm, because it is made of a material harder than the ammunition components, acts as a tool to leave impressed or striated marks on the various ammunition components that come into contact with the firearm.

   A. tool and die ☐
   B. toolmark identification ☐
   C. physics ☐
   D. forensic science ☐
   E. ballistic identification ☐

---

6. Grooves cut or formed in a spiral nature lengthwise down the barrel of a firearm.

   A. striation ☐
   B. lines ☐
   C. rifling ☐
   D. forged marks ☐
   E. all apply ☐

---

7. Which of the following is NOT an impressed action mark?

   A. Firing pin impression ☐
   B. Concentric breech marks ☐
   C. Firing pin drag marks ☐
   D. Ejector marks ☐

---

8. Firearms and ammunition of European origin use the _____ system to indicate the size of the bullet.

   A. Dewey Decimal ☐
   B. metric ☐
   C. Latin ☐
   D. caliber ☐
   E. English ☐

---

9. In addition to comparing ammunition components to firearms, firearm examiners conduct other examinations that usually include which of the following:

A. Determine the manufacturer or manufacturers of firearms that may have fired a particular bullet or cartridge case. ☐
B. All are correct ☐
C. Examine clothing and other items for gunshot residues and/or shot patterns in an attempt to determine a muzzle-to-garment distance. ☐
D. Testing firearms to determine if they function properly. ☐
E. Determine caliber and manufacturer of ammunition components. Including the examination of various shotshell components. ☐

---

10. Intentional or design characteristics that would be common to a particular group or family of items are:

A. Class Characteristics ☐
B. Impressed Marks ☐
C. Individual Characteristics ☐
D. Toolmarks ☐
E. Striations ☐

---

11. Firearms leave unique characteristics on the ammunition components due to:

A. manufacturing processes, use, and abuse ☐
B. rifling impressions ☐
C. breech marks ☐
D. drillings ☐
E. gas pressure within the barrel ☐

---

12. Two class characteristics of firearms that relate to the bullets fired from them includes:

A. caliber and rifling pattern ☐
B. striations and impressed marks ☐
C. model and barrel length ☐
D. all apply ☐
E. gunpowder and primer residues ☐

---

13. Class characteristics that relate to the identification of Cartridges and Cartridge cases are:

A. all apply ☐
B. firing pin impressions ☐
C. ejector mark shape ☐
D. extractor mark location ☐
E. breech marks ☐

---

14. If class characteristics between an ammunition component and a firearm are in agreement the next step in the examination process would be to look for:

A. microscopic residues ☐
B. safety defects ☐
C. radial fractures ☐
D. individual characteristics ☐
E. nitrites ☐

---

15. Imperfections in the surface of the interior of the barrel leave these marks on bullets:

A. contour ☐
B. concentric ☐
C. impressions ☐
D. parallel ☐
E. striations ☐

---

16. Firearm Examiners commonly use this to collect fired standards from firearms.

A. phone books ☐
B. water tank ☐
C. sand ☐
D. suction ☐
E. bullet stop ☐

---

17. Firearm Examiners validate the unique characteristics being produced by a firearm by examining these first.

A. rifling ☐
B. fired standards ☐
C. breech marks ☐
D. imperfections ☐
E. cannelure ☐

---

18. Firearm Examiners use this instrument to examine bullets and cartridge cases for similar marks.

A. bore scope ☐
B. hand-held loupe ☐
C. stereo microscope ☐
D. scanning electron microscope (SEM) ☐
E. comparison macroscope ☐

---

19. Most positive bullet identifications are made on striations that are found where?

A. on land impressions near the base of the bullet ☐
B. on the shoulder of land impressions ☐
C. on groove impressions near the base of the bullet ☐
D. near the nose of the bullet ☐
E. on the bottom of the bullet ☐

---

20. Caliber is a term used to indicate the:

A. the length of the bullet ☐
B. the quality of marks present. ☐
C. diameter of a bullet in mm. ☐
D. direction of twist in the barrel. ☐
E. diameter of a bullet in hundredths of an inch. ☐

---

21. A cartridge is a single unit of ammunition consisting of:

A. cartridge case, wadding, pellets and primer ☐
B. the cartridge case, primer, and propellant with or without one or more projectiles ☐
C. the shell, wadding, pellets, and slug ☐
D. the cartridge case, primer, and one or more projectiles ☐
E. the primer, cartridge case, and bullet ☐

---

22. All of the cartridges below are in the 22 caliber "family" except:

A. 22 Long Rifle ☐
B. 22 Long ☐
C. 22 Magnum ☐
D. 22 Mono ☐
E. 22 Short ☐

---

23. Which is not an examination designed to help firearm examiners arrive at a basic caliber for a submitted bullet.

A. measuring the bullet's diameter ☐
B. examining the physical characteristics of the bullet ☐
C. determining the age of the bullet ☐
D. weighing the bullet ☐
E. measuring the length of the bullet ☐

---

24. A revolver chambered for 357 MAGNUM cartridges can also fire which cartridge.

A. 357 Webley ☐
B. 38 Maximum ☐
C. 22 Long Rifle ☐
D. 38 Special ☐
E. 380 AUTO ☐

---

25. The following firearm normally does not have rifling in its barrel.

A. pistol ☐
B. rifle ☐
C. derringer ☐
D. shotgun ☐
E. revolver ☐

---

26. Rifling in the barrel of a firearm are made up of these two elements.

A. hills and mountains ☐
B. lands and grooves ☐
C. all apply ☐
D. lands and valleys ☐
E. creases and folds ☐

---

27. The following is a common rifling pattern.

A. 5/Left ☐
B. 15/Right ☐
C. 3-Left ☐
D. 10/Left ☐
E. 6/Right ☐

---

28. 16-Right rifling is also called _____-groove rifling.

A. micro ☐
B. small ☐
C. polygonal ☐
D. multi ☐
E. mini ☐

---

29. Hammer forged rifling usually produces this type of rifling.

A. Conventional ☐
B. Broach ☐
C. Button ☐
D. English ☐
E. Polygonal ☐

---

30. Polygonal rifling is usually found in this brand of firearms.

A. Beretta ☐
B. Hi-Point ☐
C. Smith & Wesson ☐
D. Glock ☐
E. Colt ☐

---

31. In the process that eliminates the conventional machining of metal, rifling is formed by wet-etching the interior of a barrel under an electric current. The metal inside the barrel is actually eaten away or dissolved to create grooves in the barrel.

A. Electrochemical Rifling ☐
B. Hammer Forged Rifling ☐
C. Broach Current Cut ☐
D. The Clapper ☐
E. Electro-machined Rifling ☐

---

32. Polygonal rifling has the appearance of _____.

A. Lines & Curves ☐
B. Hills & Valleys ☐
C. Creases & Wrinkles ☐
D. Lands & Grooves ☐
E. Bumps & Dents ☐

---

33. A _____ is allowed to express an opinion about the validity of the evidence in a case and may quote the statements of others in support of an opinion.

A. lay person ☐
B. public defender ☐
C. eye witness ☐
D. attorney ☐
E. expert witness ☐

---

34. Because there is a distinct edge at the transition from a land to a groove impression, the widths of the lands and grooves can be measured in this traditional rifling method.

A. Button Rifling ☐
B. Straight Rifling ☐
C. Curved Rifling ☐
D. Polygonal Rifling ☐
E. Pinched Rifling ☐

---

35. The rifling pattern in the barrel that fired a particular bullet can be determined by _____ the number of groove or land impressions around the circumference of the bullet.

A. counting ☐
B. photographing ☐
C. marking ☐
D. casting ☐
E. measuring ☐

---

36. Cartridges designed for use in auto loading pistols will usually have this word in their cartridge designation:

A. Caliber ☐
B. Auto ☐
C. Long ☐
D. Semi ☐
E. S&W ☐

---

37. The _____ is the distance the rifling needs to spiral down the barrel for it to complete a single revolution. An example would 1 turn in 12 inches.

A. spiral ☐
B. rate of twist ☐
C. core distance ☐
D. bore length ☐
E. lands and grooves ☐

---

38. _____ _____ taken from the recovered bullets can be used to determine the possible manufacturers of the firearm from which the bullets were fired.

A. Rifling Parameters ☐
B. Trace evidence ☐
C. Bullet velocity ☐
D. Cannelure configuration ☐
E. Primary colors ☐

---

39. _____ are the identified rifling pattern (i.e. 8/right) and the diameters of the individual lands and grooves.

A. Bullet size and weight ☐
B. Firearm parameters ☐
C. Cartridge case parameters ☐
D. Ballistic data ☐
E. General Rifling Characteristics (GRC) ☐

---

40. Tool marks produced on cartridge cases will be in which two basic forms.

A. smooth and course action marks ☐
B. striated and impressed action marks ☐
C. concentric and parallel action marks ☐
D. light and heavy action marks ☐
E. inner and outer action marks ☐

---

41. These action marks are produced when the cartridge case moves laterally against the tool (inner surface of the firearm) producing a scrape mark.

A. deep ☐
B. round ☐
C. impressed ☐
D. striated ☐
E. smooth ☐

---

42. These action marks are created on a cartridge case when it impacts the tool (firearm) and no lateral movement occurs.

A. impressed ☐
B. striated ☐
C. colored ☐
D. scratch ☐
E. shiny ☐

---

43. Which of the following is NOT a striated action mark?

A. Firing pin drag marks ☐
B. Phantom marks ☐
C. Concentric breech marks ☐
D. Chamber marks ☐
E. Shear marks ☐

---

44. Most firearms have some type of _____ designed to minimize the potential for accidental discharge.

A. hammer ☐
B. barrel ☐
C. cylinder ☐
D. key ☐
E. safety ☐

---

45. Which of the following is NOT a manual safety?

A. Thumb ☐
B. Cross-bolt ☐
C. Half-cock ☐
D. Internal firing pin block ☐
E. Safety button ☐

---

46. Which of the following is not an internal safety?

A. Thumb ☐
B. Hammer block ☐
C. Firing pin disconnect ☐
D. Transfer bar ☐
E. Drop ☐

---

47. _____is that given by a specialist who has been recognized by the court as having expert knowledge about evidence in the case.

A. Expert testimony ☐
B. A photograph ☐
C. Handwriting samples ☐
D. Fingerprint evidence ☐
E. A written report ☐

---

48. Conclusions reached in a bullet comparison will NOT include the following.

A. Positive ID ☐
B. Inconclusive ID ☐
C. Negative ID ☐
D. Personal ID ☐
E. Negative ID ☐

---

49. Qualifications typically given by a Firearm Examiner to be considered an expert by the courts will NOT include which of the following?

A. Specialized training received ☐
B. Drivers license number ☐
C. Past testimony experience ☐
D. College degrees held ☐
E. Years of service in the field ☐

---

50. As scientists and expert witnesses (and to remain as such), it is of the utmost importance that we maintain complete _____ in our work.

A. concentration ☐
B. partiality ☐
C. functionality ☐
D. impartiality ☐
E. ambiguity ☐
