**Frequently Asked Questions in Forensic Ballistics**

**2012 Edition**

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**1. WHAT IS BALLISTICS AS DISTINGUISHED FROM FORENSIC BALLISTICS?**

**Ballistics** is the science that deals with the motion, behavior and effects of projectiles and the conditions affecting the motion that involves direct, rotary and transitional MOVEMENT; while,

**Forensic Ballistics** isthe science of firearms identification by means of the ammunition fired through them. This is the real branch of science otherwise known as Firearm Identification.

**2. WHAT ARE THE DIVISIONS OF BALLISTICS?**

1. **INTERIOR BALLISTICS** – the science of the motion of the projectile while still in the firearm, namely the studies of combustion of the powder, pressure developed and velocity etc.
2. **EXTERIOR BALLISTICS** – the science of the motion of the projectiles after leaving the muzzle namely trajectory, parabola, velocity, range penetration, etc.
3. **TRANSITIONAL BALLISTICS** – the science of the motion of projectiles as to its behavior while travelling in the air. (E.g. twisting or gyroscopic action, yaw etc.)
4. **TERMINAL BALLISTICS** – the science of the effects of the projectile on the target.
5. (**Medical Ballistics** – Human being as target)
6. (**Legal Ballistics** – investigation involving firearms)
7. (**Geo Ballistics** – location or geography)

**3. WHAT ARE THE TYPES OF IDENTIFICATION OF FIREARM, BULLET AND CARTRIDGE CASE?**

1. Physical examination
2. Laboratory examination

(Bullet, Shell, Firearms, Cartridge and other evidence related to firearms).

**4. WHAT ARE THE DIFFERENT EFFECTS OF PROJECTILE?**

1. **INDENTATION** – entry point (hole - GWE)
2. **PENETRATION** – depthness (cavity)
3. **PERFORATION** – exit point (hole - GWE)

**5. WHAT IS THE DIFFERENCE OF SMUDGING AND TATTOOING?**

**Firearm Discharged -** These deposits around a bullet wound in cases of close-range fire are referred to as **smudging and tattooing** or stippling.

**6. WHAT IS THE DIFFERENCE BETWEEN TRAJECTORIES FROM PARABOLA?**

Answer: **Trajectory (the path the bullet will travel)** and **Parabola (the path the bullet have traveled)** is both curve path of the bullet.

**7. WHAT ARE THE THREE (3) DIVISIONS OF FORENSIC BALLISTICS?**

1. **FIELD INVESTIGATION** – refers to the work of an investigation in the field. It concerns mostly with the collection, marking, preservation, packing and transmission of firearms evidences. It includes the study of class characteristics of firearms and bullets.
2. **TECHNICAL EXAMINATION** – refers to the examiners who examine bullets/ or shells, whether fired from also whether or not cartridges were loaded and ejected made by the suspected firearms submitted. Reports are made by the examiners and testify in court regarding their reports.
3. **LEGAL PROCEEDINGS** – *Court Trials* – wherein the ballistics report of the firearm examiner and the ballistics exhibits are presented during the trial of the case in a court justice.

**8. WHAT IS FIREARM?**

**“Firearms”** or **“Arms”** are herein used includes rifles, muskets, carbines, shotguns, revolvers, pistols and all other deadly weapons from which a bullet, ball, shot, shell or other missile may discharge off by means of gunpowder or other explosives. The term also includes air rifles except such as being of small caliber and limited range used as toys. **The barrel of any firearm shall be considered a complete firearm for all purposes hereof** (Sec. 877, Revised Administrative Code)

**9. WHAT ARE THE LAWS OF FIREARM?**

1. **Revised Administrative Code** (RAC) Sec. 877 Defines Firearm
2. **Act No. 2711**, March 10, 1917
3. **P.D. No. 1866**, June 26, 1983
4. **R.A. No. 8294**, June 6, 1997

**10. WHAT ARE THE FOUR (4) TYPES OF FIREARM?**

1. **Revolver** - a hand firearm in which a rotating cylinder successively places cartridges into position for firing.
2. **Pistol** - a hand firearm usually applied to simple shot and automatic loading.
3. **Rifle** - a type of weapon designed to be fired from the shoulder.
4. **Shotgun** - a smooth-bore weapon designed to shoot a number of lead pellets in one charge.

**11. WHAT IS THE KIND OF GUN THAT WHEN THE TRIGGER IS ONCE PRESS, THE BULLETS ARE RELEASE SUCCESSIVELY?**

Answer: **Machine Gun (trigger) (Automatic-loading mechanism, Action-release of hammer, Single action and Double action)**

**12. WHEN LOOKING FOR SIMILARITIES IN FIREARM IDENTIFICATION, WHAT IS TO BE CONSIDERED?**

Answer: **Rifling - Barrel**

**13. WHEE DO YOU FIND THE FINGERPRINT OF A GUN?**

Answer: **Rifling**

**14. WHAT IS RIFLING?**

Answer: **The RIFLING consists of a number of helical grooves cut in the interior surface of the bore of the firearm.**

**15. WHAT ARE THE TYPES OF FIREARMS IN RIFLING?**

1. **Small type** – four grooves, right hand twist, grooves and lands of equal width. (4R G-L)
2. **Smith and Wesson type** – five grooves, right hand twist, grooves and lands of equal width (5R G-L)
3. **Browning type** – six grooves, right hand twist, narrow lands and broader grooves (6R G2X)
4. **Colt type** – six grooves, left hand twist, narrow lands and broader grooves (6L G2X)
5. **Webley type** – seven grooves, right hand twist, narrow lands and broader grooves (7R G3X)
6. **Army type** – four grooves, right hand twist, narrow lands and broader grooves (4R G3X)

**16. WHERE FINGERPRINT OF A GUN IS FOUND?**

Answer: **Barrel**

**17. IN BULLET RECOVERY BOX, RECOVER THE BULLET IN \_\_\_\_\_\_\_\_\_ FOR COMPARISONS.**

Answer: **Perfect conditions**

**18. WHAT IS THE DUPLICATE OF THE BARREL?**

Answer: **Bullet**

**19. RIFFLING – LANDS AND GROOVES – CAUSE THE TWISTING. THE MAIN PURPOSE IS FOR THE BULLET TO…?**

Answer: **Stabilize flight to avoid tumbling.**

**20. BULLET CAN BE IDENTIFIED THROUGH?**

**a. Class characteristics**

**b. Individual characteristics**

**21. WHAT IS CALIBER?**

Answer: **Caliber is the diameter of the inner surface of the barrel that is measured from land to land.**

**22. WHAT IS CARTRIDGE?**

Answer**: Is a tabular metallic or non-metallic container which holds together the bullet, gunpowder and primer.**

**23. WHAT ARE THE COMPONENTS OF A CARTRIDGE?**

1. **Primer** - is a small charge of an impact-sensitive chemical mixture that can be located at the center of the case head or inside a rim.
2. **Gun powder** - is a mixture of sulfur, charcoal the sulfur and charcoal acting as fuels, while the saltpeter works as an oxidizer.
3. **Bullet** - is a projectile propelled by a firearm, sling, or air gun.
4. **Case** – is a self-contained cartridge loaded with lead shot designed to be fired?

**24. WHAT IS THE EQUIVALENT OF CALIBERS IN INCHES AND MILLIMETERS?**

American and Continental system

* 1. Caliber.22 – About 5.59 mm.
  2. Caliber.25 – About 6.35 mm.
  3. Caliber.32 – About 7.65 mm.
  4. Caliber.30 – About 7.63 mm.
  5. Caliber.38 – About 9 mm.
  6. Caliber.45 – About 11 mm.
  7. Caliber.50 – About 12 mm.

**25. WHAT IS A BULLET?**

Answer: **Is a metallic object responsible in damaging the target.**

**26. METALLIC OBJECT RESPONSIBLE IN DAMAGING THE TARGET**

1. Bullet
2. Projectile
3. Slug
4. All of these (Answer)

**27. WHAT IS SPECIAL BULLET?**

Answer: **Special intended purpose**

**28. DO YOU CONDUCT FIRE TEST ON THE SUSPECT FIREARM?**

Answer: **Yes, because that is the origin of the fired bullet.**

**29. HOW MANY BULLETS (STANDARD) ARE TO BE USED IN FIRE TESTING?**

3 bullets – 3 test

1st test – Preliminary

2nd – Confirmatory

3rd – Conclusive

**30. WHAT IS THE LOWEST AND HIGHEST CALIBER OF A FIREARM?**

Answer: **Lowest: Caliber 22**

**Highest: Caliber 50**

**31. WHO APPROVES THE DESIGN AND KINDS OF BULLET AND FIREARMS IF IT IS OK FOR WARFARE?**

Answer: **NATO** (North Atlantic Treaty Organization)

**32. IF THE BULLET IS A NAKED BULLET, THIS IS USUALLY FIRE FROM WHAT FIREARM?**

Answer: **Revolver**

**Copper bullet-Pistol/Rifle**

**33. WHAT IS SMOOTHBORE FIREARM?**

Answer: **Shotgun and musket (muzzle loading)**

**34. WHAT IS THE CALIBER OF A GUN?**

Answer: **Bore diameter**

**35. WHAT IS THE DIFFERENCE BETWEEN CALIBER AND CALIPER?**

**CALIBER**- refers to the measurement of the barrel of a gun-bore diameter.

**CALIPER**- refers to the measuring instrument.

**36. IN BULLET EXAMINATION UNDER THE MICROSCOPE. WHAT SIDE OF THE PLANE THE TEST BULLET IS PLACED?**

Comparison microscope

1. Left side - Evidence bullet

2. Right side – test bullet

**JUXTAPOSITION**

**37. IN TEST FIRING USE CLOSED TO THE SAME BULLET IF NO EXACT/SAME BULLET IS AVAILABLE. IF BULLET IS DEFORMED, CAN STILL BE EXAMINED?**

Answer: **No, declare it as insufficient for examination**

**38. ALL BULLETS MANUFACTURED ARE SLIGHTLY LARGER THAN THE BORE DIAMETER OF THE BARREL. (AS A FEDERAL RULE)**

Answer: **Yes**

**39. IS IT POSSIBLE THAT A CAL. 38 BULLET CAN BE FIRED FROM CAL. 45 FIREARMS?**

Answer: **Yes**

**40. IT IS NOT A GOOD BASIS OF FIREARM IDENTIFICATION.**

Answer: **Firing pin mark**

**41. WHAT WILL GIVE YOU THE CALIBER OF THE FIREARM IN A CARTRIDGE CASE?**

Answer: **Diameter of the mouth and not the base.**

**42. WHAT FIREARM WAS FIRED WHEN THE FIRING PIN MARK IS CIRCULAR?**

Answer: **Bolt - Rifle**

**43. WHAT FIREARM WAS FIRED WHEN THE FIRING PIN MARK IS VERTICAL MARKING AND HAS A 3 O’CLOCK POSITION?**

Answer: **Pistol (Extractor/Ejector)**

**44. WHAT FIREARM WAS FIRED WHEN THERE WAS NO EXTRACTOR AND EJECTOR?**

Answer: **Revolver**

**45. THE BULLET MARKING MAYBE IN THE FORM OF \_\_\_.**

Answer: **Line \_\_\_\_\_**

**Contour**

**\* Called STRIATIONS**

**46. WHAT FIREARM WAS FIRED WHEN THE FIRING PIN MARK IS AT THE SIDE OF THE CARTRIDGE BASE?**

Answer: **Cal. 22 Revolver/Rifle (Rim fire)**

**47. WHAT ARE THE CHARACTERISTICS OF FIREARMS DUE TO WEAR AND TEAR AND THE IMPERFECTIONS OF THE GUN MANUFACTURER?**

Individual characteristics

\* CLASS CHARACTERISTICS

**48. WHAT IS MORE DANGEROUS: THE GSW OF A PERSON WHERE THE BULLET IS LODGE OR THE GSW WHERE THE BULLET PERFORATED?**

GSW-Bullet is lodge in the person

Why:

1. Poisoning

2. Internal hemorrhage

**49. IT IS THE FIRST TRIGGER DESIGN IS CALLED \_\_\_\_.**

Answer: **Serpentine**

**50. WHAT IF THE BULLET IS A NAKED BULLET, THIS IS USUALLY FIRE FROM WHAT FIREARM?**

Answer: **Revolver**

**Copper bullet-Pistol/Rifle**

**51. WHAT KIND OF BULLET DESIGN INTENDED TO PENETRATE METAL TARGET?**

**Armor piercing bullet (Answer)**

**Hollow point-shape**

**Dumdum-street name (origin)**

**Incendiary bullet**

**Spitzer bullet**

**52. WHAT IS THE WEAPONS OF MASS DESTRUCTION (WMD)**

Answer: **Nuclear weapon**

**53. WHAT IS THE LENGTH OF A SHOTGUN CARTRIDGE CASE?**

Answer: **2.75 INCHES**

**54. WHAT IS THE FEAR OF A FIREARM?**

Answer: **HOPLOPHOBIA (1960 – JEFF COOPER)**

**55. WHO INVENTED THE FIRST REVOLVER IN 1836?**

Answer: **SAMUEL COLT**

**56. WHO IS THE FATHER OF MODERN SHOTGUN?**

Answer: **JOSEPH MANTON**

**57. WHAT IS THE BOUNCING OF BULLETS? (MARCH 2008 BOARD EXAMINATION)**

Answer: **Ricochet**

**58. WHAT IS COMPLETE UNFIRED UNIT? (MARCH 2008 BOARD EXAMINATION)**

Answer: **Cartridge**

**59. WHAT ARE THE TWO CLASSIFICATION OF BARREL? (MARCH 2008 BOARD EXAMINATION)**

Answer: **Smoothbore & Riffled Barrel**

**60. IT REFERS TO THE IMPACT OF THE BULLET. (MARCH 2008 BOARD EXAMINATION)**

Answer: **Terminal energy**  
\*terminal penetration   
\*terminal accuracy  
\*terminal velocity

**61. IT REFERS TO A GUN THAT IS MORE THAN 1 INCH OF A BARREL**  
Answer**: ARTILLERY (e.g. Cannon & Bazooka)**

**62. IT IS RESPONSIBLE FOR PUSH AND SHATTER EFFECTS IN ANY EXPLOSIONS**

Answer: **BOMB**

**63. WHO IS THE FATHER OF MODERN BALLISTICS?**

Answer: **Calvin Goddard**

**64. IT REFERS TO THE SPEED OF THE BULLET.**

Answer: **Velocity**

**65. WHERE IS THE LOCATION OF THE MARKINGS OF EVIDENCE WITH REGARD TO FIREARM?**

Answer: **Edge of the trigger guard**

**66. IS THE FAMOUS GUNPOWDER RESIDUE TEST CONDUCTED TO THE HAND A SUSPECTED FIRER?**

Answer: **Paraffin test or dermal nitrate test**

**67. IT RECORDS THE INTERIOR OF THE BARREL.**

Answer: **Helixometer**

**68. IS THE PICTURE OF A FIREARM ADMISSIBLE IN COURT? (April 2011 board examination)**

Answer: **No (firearm itself)**

**69. IS A BARREL OF A GUN CONSIDERED A COMPLETE FIREARM? (April 2011 board examination) Answer: Yes**

**70. IN LEGAL DEFINITION OF FIREARM, IS MUSKET INCLUDED? (April 2011 board examination) Answer: Yes**

**71. WHAT IS THE ILLEGAL POSSESSION OF FIREARM LAW? (APRIL 2011 BOARD EXAMINATION)**

Answer: **RA. 8294**

**72. IS PISTOLS/REVOLVERS ARE COMMONLY USED BY CRIMINALS BECAUSE?** **(October 27, 2011 Licensure Examination for Criminologist)**

1. Easy to use
2. Portable
3. Easy to conceal (Answer)
4. automatic

**73. WHAT IS THE DIFFERENCE BETWEEN EXIT WOUND AND ENTRY WOUND?** **(October 27, 2011 Licensure Examination for Criminologist)**

1. **Entry wound** – A wound made by a bullet or other object as it enters the body, as contrasted with exit wound.
2. **Exit wound** – A perforation of the skin caused by a projectile such as a bullet leaving the body.

**74. WHAT IS THE SYMBOL OF AUTOMATIC OPERATION OF MACHINE GUN? (OCTOBER 27, 2011 LICENSURE Examination for Criminologist)**

Answer: **A**

**75. WHAT IS OBSOLETE AMONG THE FOLLOWING?** **(March 2012 Board Examination for Criminologist)**

* 1. Rimfire
  2. Centerfire
  3. Pinfire (Answer)
  4. All of the above

**76. WHAT IS THE DIFFERENCE BETWEEN INTERIOR AND EXTERIOR BALLISTIC?** **(March 2012 Board Examination for Criminologist)**

1. **INTERIOR BALLISTICS** – study of the motion of the projectiles while still in the firearm, namely the studies of combustion of the powder, pressure developed and velocity.
2. **EXTERIOR BALLISTICS** – study of the motion of the projectiles after leaving the muzzle namely trajectory, velocity, range penetration, etc.

**77. WHAT IS THE LOWEST AND HIGHEST CALIBER OF A FIREARM?**  **(March 2012 Board Examination for Criminologist)**

Answer: **Lowest: Caliber 22**

**Highest: Caliber 50**

**MARKING OF FIREARM EVIDENCE**

**78. WHAT IS THE INSTRUMENT USE TO MARK EVIDENCE IN FIREARM IDENTIFICATION?**

Answer: **STYLUS** – a ball pen like with a pointed metal at the ballpoint.

**79. WHAT MARK?** **Initial of the police officer**

**80. WHERE DO YOU MARK WHEN IT IS A CARTRIDGE?**

**Answer: OGIVE**

**81. WHERE DO YOU MARK WHEN IT IS A BULLET?**

**Answer: Base**

**82. WHERE DO YOU MARK IF IT IS A SHELL?**

**Answer: Inside the mouth**

**83. WHERE IS THE LOCATION OF THE MARKING OF A FIREARM?**

**Answer: edge of the trigger**

**84. IF BULLET/SHELL IS DEFORMED OR FRAGMENTED where do you mark?**

Answer: **Marking will no longer be applicable, it should be labeling**

**85. HOW ABOUT IF THERE ARE TWO OR MORE FIREARMS?**

Answer: **Tagging**

**86. WHAT ARE THE LATEST TRENDS IN DATABASE COMPUTER SYSTEM (FIREARM IDENTIFICATION)?**

1. Ceasefire
2. Drugfire
3. Ibis
   1. Brasscatcher
   2. Bulletproof
4. Nibin