firearms

- Definition.
Definition.
Main types of firearm
Hand guns
Rifles
Shot gun (smooth bore)
Sub machine guns
Machine guns
Types of shot guns

- Single barrel
- Double barrel
- Pump action
- Lever action
- Bolt action
- Air gun
- Automatic loading
Classification of rifled firearms

- **Rifled**
- **Group 1**
  - **Hand gun**
    - Revolvers
    - Semiautomatic pistols
  - **Sub machine guns**
    - Fully automatic
    - .22 rim fire rifles
  - **Assault rifles**
    - Self loading
    - Automatic
    - Large magazine capacity
- **Group 2**
- **Center fire rifles machine guns**
Structure of fire arm

- Barrel
- Action
- Bolt
- Trigger
- Grip
- magazine
- Range of fire
- Muzzle velocity
- Striking velocity
Rifling

- Spiral grooves have been cut the length of interior bore of the barrel.
- Rifling consists of these grooves and the metal left between the groove --- the land.
- Rifling impart no. of marking to the bullet that are called class characteristics .indicate make and model of the gun.
- **Importance**
  - Rotate or spin on its axis
  - Give gyroscopic stability
  - Increase accuracy to hit the target
  - Prevent from wobbling
• Bore/gauge

• Caliber
Ballistics

• Interior ballistic

• Exterior ballistics

• Terminal ballistics

• Wound ballistics
CARTRIDGE

• ONE UNIT OF AMMUNITION
  • cartridge case with percussion cap
  • primer
  • propellant charge
  • Projectile (bullet or pellets)
  • wad (in case of shot guns)
    • Metal cylinder
    • Name of manufacturer stamp at the base.

FUNCTIONS OF CARTRIDGE
Shot gun cartridge

- Made of plastic
- Metal base
- Powder, wad and pellets
- Wad
  - Different in different manufacturer
  - Plastic/paper/card board
  - Bird shot
  - Buck shot
  - Polyethylene cup shot contribute to wound
  - Plastic granules as filler
Blank cartridge

- Blank cartridge
  - Contain primer, gun powder, and wad
  - Without bullet
  - Sealed with paper disk
  - dangerous in contact /close fire
Primer

- Metal cap at the base of the cartridge holding sensitive mixture.
- Detonated by blow either from hammer /firing pin
- Misfire/hang fire due to defective primer
- Help in detection of entrance wound and firing distance
- Composition
  - Potassium chlorate
  - Antimony sulphide
  - Lead styphenate
  - Barium nitrate
Gun powder

- Black powder
- Smokeless powder
Bullet

- Part of cartridge that leaves the muzzle on firing the weapon.
- Lubricated with grease to prevent lead fouling

- Lead
- Metal jacketed
  - Partial(copper and copper alloy)
  - full metal jacket(steel)
  - Use in center fire rifles due to high velocity
Types and shape of bullets

- Types
  - Round nose
  - Wad cutter
  - Semi wad cutter
  - Hollow point
- Baton round
- Tandem bullet
- Duplex round
- Yaw
- Tumbling bullet
- Tail wag
Effect of product of fire

1 Flame
2 Gases of combustion
3 Smoke
4 Burning powder
5 Unburnt powder
6 Projectile
Tattooing
Choking

- IMPORTANCE
  - Compactness to the shot
  - Main charge remain close together
  - For greater effective distance