

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 consist 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 styphanate
 - 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