

## **UNIT III GUERRILLA WARFARE**

1. Concept and objectives
2. Characteristics Guerilla warfare
3. Elementary knowledge of Insurgency and Counter insurgency

## **UNIT IV NUCLEAR WARFARE**

1. Concept and origin
2. Effects of Nuclear Blast, Thermal Radiation, Nuclear Radiation.
3. Elementary knowledge of Missiles

## **UNIT V TERRORISM**

1. Definition and Causes
2. Types
3. Techniques

## NUCLEAR WARFARE - UNIT-4

\* A nuclear weapon is an explosive device that derives its destructive force from nuclear reactions, either fission or a combination of fission and fusion.

Nuclear weapon, device designed to release energy in an explosive manner as a result of "nuclear fission, nuclear fusion", or a combination of the two processes.

### CONCEPT OF NUCLEAR WARFARE & ORIGIN:

\* The world's first nuclear weapons explosion on July 16, 1945, in New Mexico, when the United States tested its first NUCLEAR Bomb. On Aug 6, 1945, the United States dropped an Atomic bomb on the Japanese city of "Hiroshima".

It killed or wounded nearly 130,000 people. Three days later, the United States bombed "Nagasaki." Of the 286,00 people living there at the time of the blast, 74,000 were killed and another 75,000 sustained severe injuries. Japan agreed to an unconditional surrender on Aug 14, 1945; it also resulted in the end of World War II.

\* In subsequent years, the United States, the Soviet Union, and Great Britain conducted several nuclear weapons tests. In 1954, President Jawaharlal Nehru of India called for a ban on nuclear testing. France exploded its first nuclear device in 1960 and China entered the "Nuclear Arms Club" in October 1964 when it conducted its first test.

## EFFECTS OF NUCLEAR BLAST :

\* Nuclear explosions produce air-blast effects similar to those produced by conventional explosives. The shock wave can directly injure humans by rupturing eardrums, lungs or by hurling people at high speed, but most casualties occur because of collapsing structures and flying debris.

## THERMAL RADIATION :

\* Thermal radiation may make fire a collateral effect of the use of surface burst, air-burst or shallow-penetrating nuclear weapons. The potential for fire damage depends on the nature of the burst and the surroundings. Thermal radiation is the emission of the electromagnetic

waves from all matter that has a temperature greater than absolute zero. Thermal radiation reflects the conversion of thermal energy into electromagnetic energy. Thermal energy is the "kinetic energy" of random movements of atoms and molecules in matter.

### NUCLEAR RADIATION:

\* The three most common types of radiation are Alpha particles, Beta particles and Gamma rays.

Radiation particularly associated with nuclear medicine and the use of nuclear energy, along with X-rays, is

**Ionizing radiation.** NUCLEAR RADIATION refers to the particles and photons emitted during reaction that involve the nucleus of an atom.

Nuclear radiation is also known as ionizing radiation. Exposure to very high levels of radiations such as being close to an atomic blast, can cause acute health effects such as skin burns and acute radiation syndrome. It can also result in long-term health effects such as cancer and Cardiovascular diseases.

### ELEMENTRY KNOWLEDGE OF MISSILES!

\* Missiles were invented in medieval China (10th AD), but its first practical use for serious purpose took place in 1232 AD by the Chinese against mongols. A cruise missile is basically a small unmanned aircraft. They are also called as Unmanned Aerial Vehicles (UAV).

A missile is any weapon which flies towards its target. It could be anything from a rock that you pick up off the ground and throw at an enemy, to spear, an arrow, a bullet, up to a multi staged rocket carrying multiple MIRV - type nuclear weapons.

### Conclusions:

\* In an attack with a nuclear weapon on a "chemical weapons" facility, civilian deaths from the effects of the nuclear weapon itself are likely to be much greater than civilian deaths from dispersal of the chemical agents.