

UNIT I PSYCHOLOGICAL WARFARE

1. Definition and nature
2. Types of propaganda
3. Brain washing and its effect& Rumour and its types

UNIT II BIOLOGICAL AND CHEMICAL WARFARE

1. Concept and Objectives and Characteristics
2. Types of Agents and Methods of Use.
3. Recent trends.

Biological Warfare (Concepts and Agents)

Characteristics:

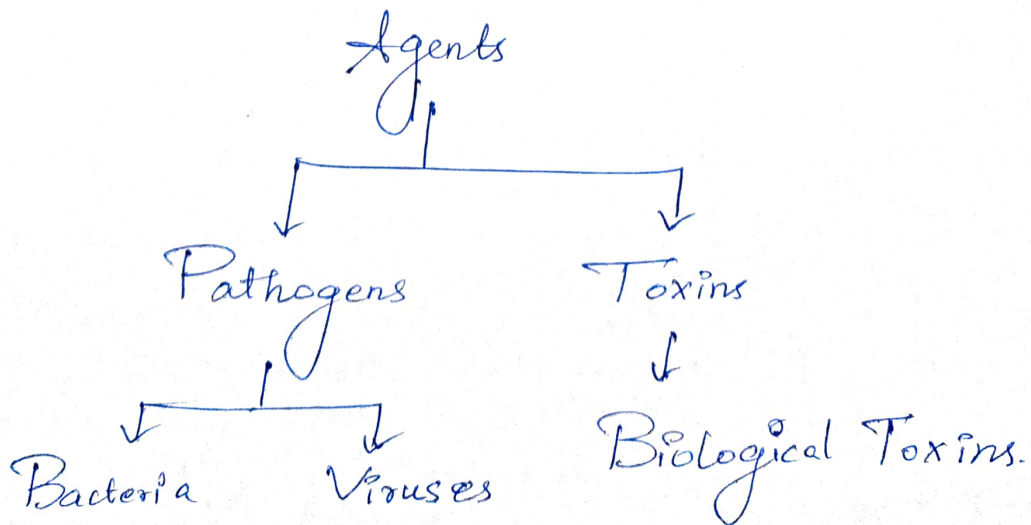
- [i] The ability to infect reliably in small doses
- [ii] High virulence or capacity to cause acute illness resulting in death or incapacitation.
- [iii] The ability to remain potent during production, storage and handling.
- [iv] Short incubation period between infection and onset of symptoms.
- [v] Resistance to medical treatment
- [vi] Suitability for economical production in military significant quantities
- [vii] Ease of dissemination
- [viii] The attacking forces employing agents is protected against the agent.

Biological Warfare & Agents:

- Defined as the use of pathogens, that is, disease causing bacteria and viral agents or biologically derived toxins against humans, animals or crops. The word "toxin" from the Greek word means for "bow" originated from the use of poison on arrow heads showing that human have utilized disease and toxins in contact.

Warfare Agents:

- involves the use of several broad categories of agents



Bacteria: causes diseases in human by invading tissues and for producing toxins.

Agents: Anthrax, Plague, Tularemia, Glanders, Q-fever, cholera.

Viruses: Viruses causes the majority of diseases in humans ranging from the common cold to extremely lethal Ebola. It requires a host cell to reproduce.

Smaller than Bacteria in size (1 micron).

Agents: Small pox, Hemorrhagic fever viruses, Venezuelan Equine Encephalitis, foot-and-mouth diseases, ebola.

Bacterial Biological toxins:

- poison their victims by attacking the nervous system, blocking the transmission in neurons and paralyzing the muscles

nuded in order to breathe.

Agents: Saxitoxin, botulinum, Ricin, mycotoxins, Staphylococcal Enterotoxin (SEB), Trichothecene mycotoxin

Delivery Systems: (Aerosol).

⊕ First CW delivery system - cylinders of liquified chlorine were brought to the front and the agent was released in the form of gas. The prevailing wind will bring the chlorine to the enemy trenches (not seen in modern warfare).

The most efficient form of delivery system was live mortar projector (a large mortar round artillery shell) containing a CW agent or its components. The chemicals were stored in large cylinder with an explosive charge running through the centre.

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When the cylinder was lobbed towards the enemy it gets exploded and a mixture of aerosol, larger airborne droplets and toxic vapours were thus created. Detonating the shell as it neared its target produces a fair amount of aerosol, and a range of droplets from small to large depending on the engineering of the munition.

Chemical Warfare:

Concepts of Brief History:

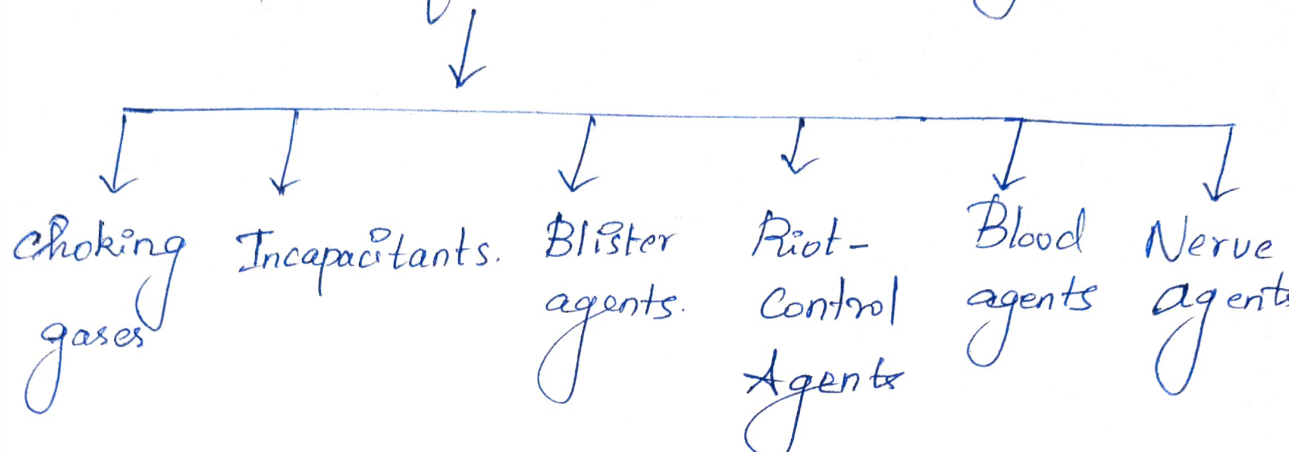
- ① Precursors in ancient and medieval warfare (especially in siege warfare)
- ② First recorded use of poison gas in the wars between Athens and Sparta (431-404 B.C) - flaming pitch & sulphur mixtures (fiery siege weapons and smoke generating)

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① Before 1000 AD - Chinese Gunpowder
Epic-addition of arsenic in making
incendiary bombs.

Fire and Smoke have a long history as
a tool of warfare. Petroleum is perhaps
the oldest known incendiary used in
large scale combat.

② 8th Century AD - Arab soldiers were
using Naptha as a weapon -
Second crusade war - arabes used
fire protective clothing to protect
from incendiary attacks.

Basic classes of chemical weapon agents -



Choking gases (Lung irritants):-

- causes injury chiefly in respiratory tract that is nose, throat and particularly in lungs. Lungs become filled with liquid and death results from lack of oxygen

Agents: Chlorine, Phosgene, Diphosgene, Chloropicrin

Blister Agent: (Vesicants).

Exposure to the agent results in skin irritation, temporary/permanent blindness as well as life threatening damage in respiratory tract.

Agents: Mustard, Nitrogen mustard,
Lewisite, nettle gas, phosgene, phosgene.

Blood Agents: - Poisons that block oxygen utilization or uptake from blood, effectively causing the body to asphyxiate.

Agents: Hydrogen cyanide, cyanogen chloride
Arsine, Carbon monoxide

Nerve Agents: - Second Generation CW agents kill by paralysing the respiratory musculature and cause death in less than a few minutes.

Agents: Tabun, Sarin, Soman and Vx.

Incapacitants (Psychoactive chemical in war)

Incapacitate, disorient or even paralyze military personnel or civilians.

Agents: BZ, Lysergic acid diethylamide
Mescaline, Methaqualone.

Riot Control Agents :

Used to combat public disturbances
or non lethal means of disperse
unruly crowds

Agents : Tear gas, Lacrimators [Eye Irritators]
Stemetators.
