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UNIVERSITY

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PRESENTATION ON

DEFINITION OF EXPLOSIVES ,TYPES OF EXPLOSION , OXYGEN BALANCE AND ITS IMPORTANCE

CUFS 2416 EXPLOSIVE AND POST BLAST INVESTIGATION

B.SC. FORENSIC SCIENCE (SEM 6)
SCHOOL OF FORENSIC SCIENCES
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DEFINITION OF EXPLOSIVE-

- Explosives are solid, liquid or gaseous substances on heating can produce a large amount of heat and large volume of gas at high temperature and pressure.
- Any substance that can be produce a volume of rapidly expanding gas in an extreme period of time.



EXPLOSION AND FACTORS AFFECTING EXPLOSION-

- Explosion-The explosion mainly happens due to the rapid combustion of a flammable material, releasing high amount of volume and energy with generation of high amount of temperatures and gases in a chemical reactions.
- FACTORS AFFECTING EXPLOSION-
- 1.Chemical properties
- 2.moisture content
- 3.Cloud dispersion

TYPES OF EXPLOSION-

- There are 4 types of explosion-
- A. Chemical explosion
- B. Electrical explosion
- C. Mechanical explosion
- D. Nuclear explosion

I.CHEMICAL EXPLOSION

- A chemical explosion is a compound or mixture which decomposes with extreme rapidity ,yielding much gas and heat.
- For a chemical explosion following exhibit must be required-
- Rapid expansion.
- Evolution of heat.
- Initiation of reaction.
- Rapidity of a reaction.
- Two types of chemical explosion-1.detonation 2.deflagration



2.ELECTRICAL EXPLOSION-

- An electrical explosion is the sudden release of energy due to a short circuit between power phases.
- E.g-when copper turns from a solid to vapour it expand up to 67000 times of its normal factor



3.MECHANICAL EXPLOSION-

- These are completely physical, mechanical explosions occur when a tightly sealed container under pressure encounters a break at which point it releases its gases or liquids causing an explosion.



4. NUCLEAR EXPLOSION-

- Nuclear explosion-it is an explosion that occurs as a result of the rapid release of energy from a high speed nuclear reactions.
- The driving reaction may be of two reaction-
- Nuclear fission
- Nuclear fusion
- And sometimes both can react simultaneously
- Nuclear explosions are used in nuclear weapons and nuclear testings.



THANK YOU.

