OZONOLYSIS [DEPTH OF BIOLOGY]

- Reaction used in organic chemistry to determine the position of C=C (carbon-carbon double bond)
- Where ozone is employed to cleave the unsaturated bond of alkene. [DEPTH OF BIOLOGY]

- The 2 step conversion of an alkene into an ozonide followed by its reduction cleavage to yield carbonyl compound is called ozonolysis [DEPTH OF BIOLOGY]

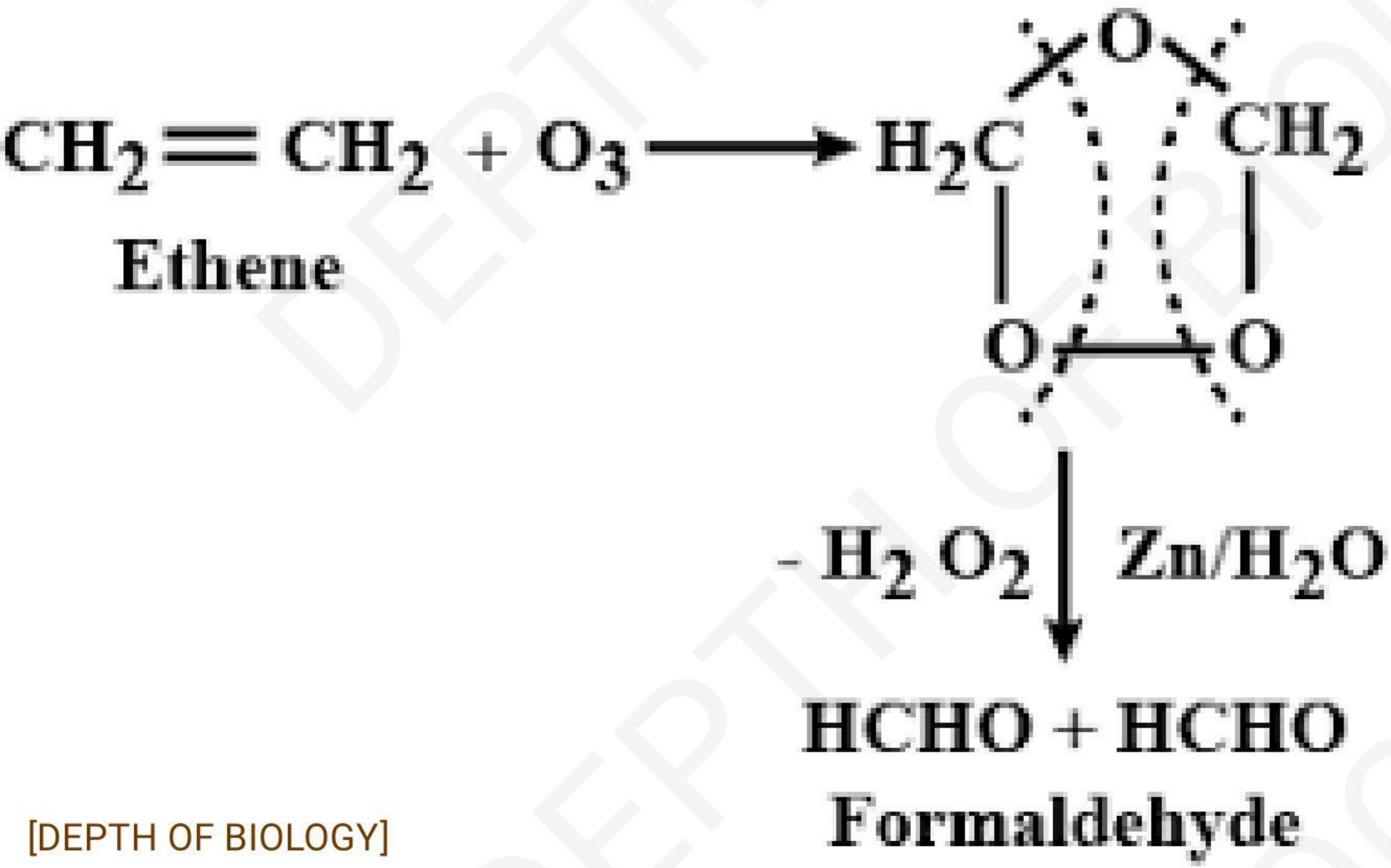
- Ozonide are unstable & explosive compounds. They are naturally isolated & reduced [DEPTH OF BIOLOGY]

- **CONDITIONS (1ST STEP)** [DEPTH OF BIOLOGY]

1. Alkene should be present in inert solution of CH_2CL_2 or CCL_4.
2. The temperature should be maintained between 196-200k (low temp. req).

2nd step

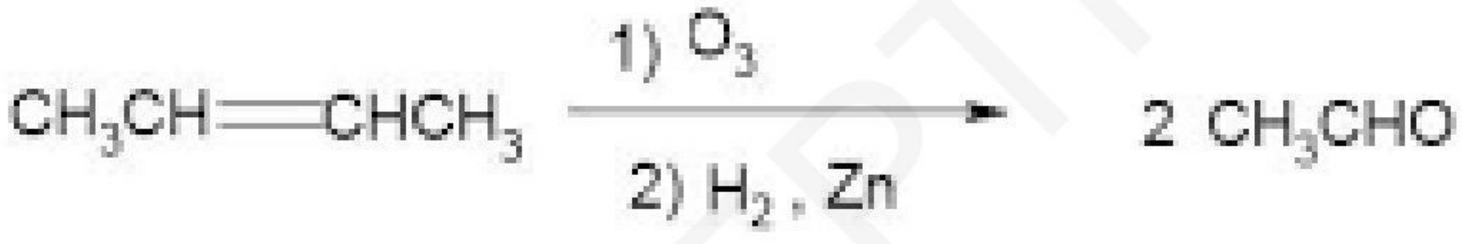
1. As ozonide are highly explosive compound hence they should mix with zn dust & water or H2/Pd to give aldehyde or ketone or mixture [DEPTH OF BIOLOGY]


CH2 = CH2 + O3
Ethene
H2C
CH2
O
O
- H2 O2
Zn/H2O
HCHO + HCHO
Formaldehyde

IMPORTANCE OF OZONOLYSIS

[DEPTH OF BIOLOGY]

- Helps in locating the position of a double bond in an unknown alkene since no diff. alkenes gives the same combination of aldeyhde or ketones



[DEPTH OF BIOLOGY]