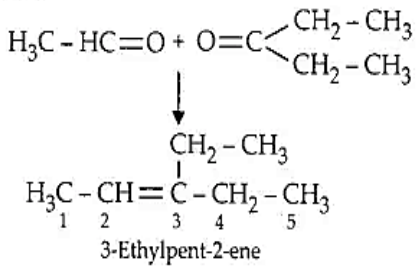
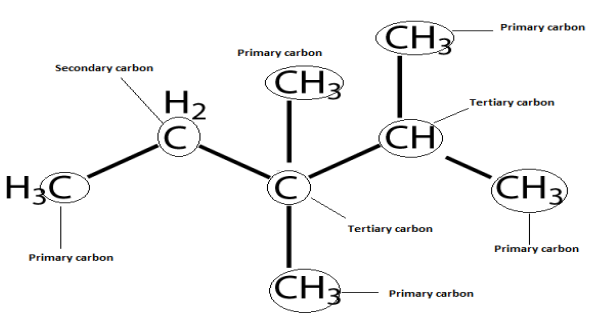
INDIAN SCHOOL MUSCAT
DEPARTMENT OF CHEMISTRY
CLASS – 11
HYDROCARBONS
ANSWERS

5	An alkene on ozonolysis gives a mixture of ethanal and pentan-3-one. Write the structure and IUPAC name of the alkene 
6	Which geometrical isomer of 2-hexene will have a higher boiling point? Why? The cis isomer will have higher boiling point due to more polar nature leading to stronger intermolecular dipole-dipole interactions thus requiring more heat energy to separate them whereas trans from being non-polar have weak induced dipole interactions and so have lower boiling point.
8	Give reason b) Alkenes undergo electrophilic addition reactions easily Alkenes are electron rich due to pi electrons, due to which they are attacked by electrophiles easily and show electrophilic addition reaction. d) Nitro group is meta directive The electron density at meta position is relatively higher than at the ortho and para position. Hence nitro group is meta directing in electrophilic aromatic substitution reaction.
9	

11	Which of the following will exhibit geometrical isomer? Why? a) Pent-1-ene b) pent-2-ene Draw cis and trans for pent -2-ene Trans-pent-2-ene and cis-pent-2-ene have same molecular formula but differ in the relative position of groups/have different configuration in 3D.
12	Definition with example
13	What happens when? 2-methylbut-2-ene is treated with alk. KMnO4 at 373K Write equation to show the products obtained. It gives propanone and ethanoic acid
14	How will you distinguish between a) Propane and propene- Using bromine water. Propene decolorizes red brown color whereas propane doesn't.