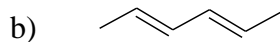
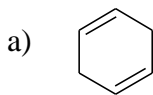


1) Classify the following dienes and polyenes as isolated, conjugated, cumulated or some combination of these classifications.

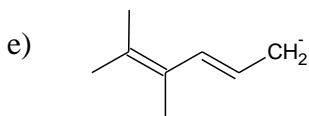
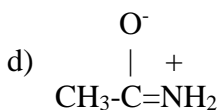
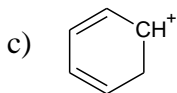
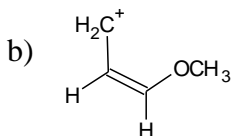
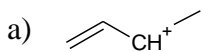


a) 1,5-cyclooctadiene

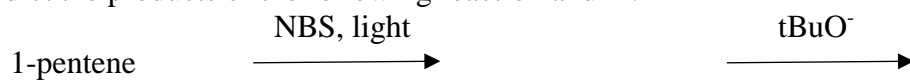
b) 1,3-cyclooctadiene

c) 1,2-cyclodecadiene

2) Draw the important resonance contributors for the following cations, anions and radical.



3) Predict the products of the following reaction and in:



4) How will you synthesize 1,3-cyclohexadiene from cyclohexane.

5) Predict the products of the following reactions:

a) cyclopentadiene + HCl

b) 2-methylpropene + NBS, light

c) 1,3-butadiene + bromine water

d) 1-(bromomethyl)-2-methylcyclopentene, heated in methanol