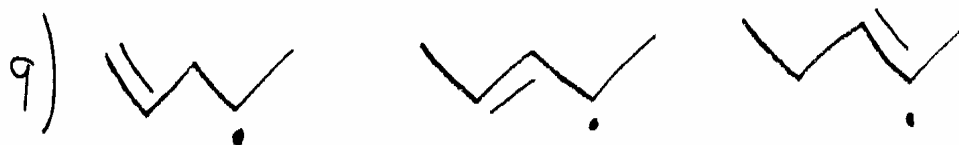


1) What is a free radical species?

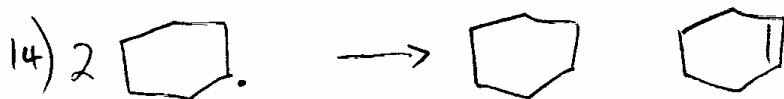
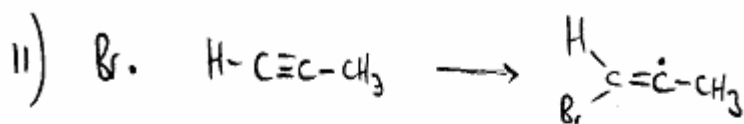
2-6) List the 5 types of reactions that radicals can perform. (Hint: the reaction types start with A, A, D, D, and F)

7) Which one of the above terms describes a process where a species undergoes both oxidation and reduction ?

8-10) Circle the most stable species in each threesome.



11-15) Identify each below reaction using the reaction types that start with A, A, D, D, and F.



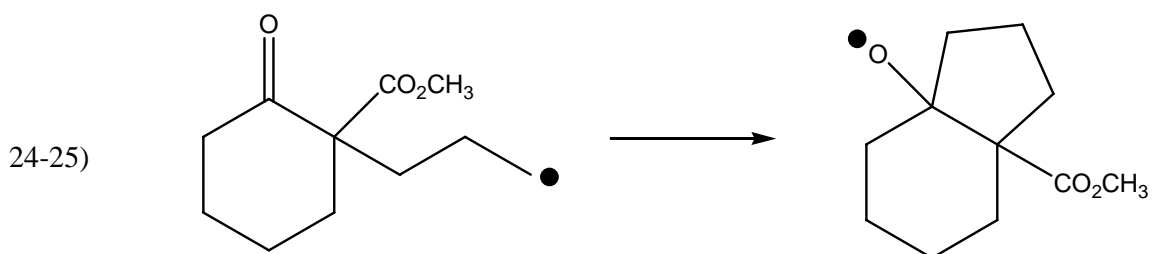
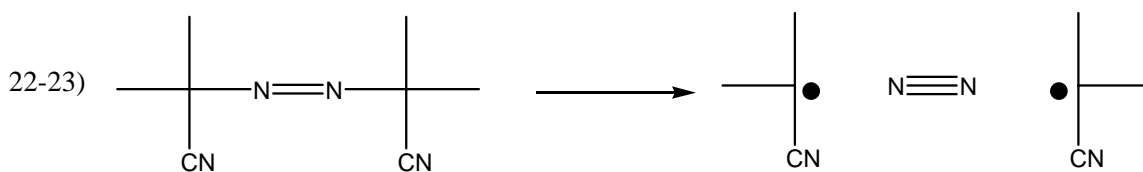
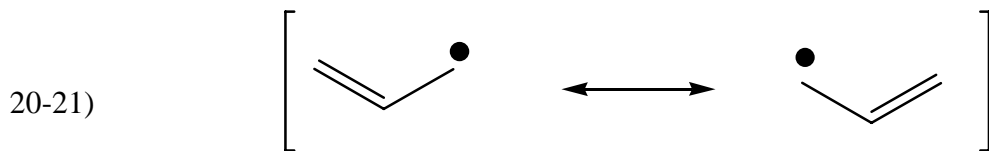
16) Why are special measures taken to remove air from almost all radical reactions?

17) What name is given to species which slow down or stop free radical reactions?

18) Name one gas commonly used as an inert atmosphere for radical reactions.

19) What effect does increasing the solvent polarity have on the reaction rates of almost all radical reactions?

20-25) Use appropriate curly arrows to describe the electron movement for the following three processes.



1) What is a free radical species?

A species with an unpaired electron.

2-6) List the 5 types of reactions that radicals can perform. (Hint: the reaction types start with A, A, D, D, and F)

Addition, Abstraction, Dimerization, Disproportionation
& Fragmentation.

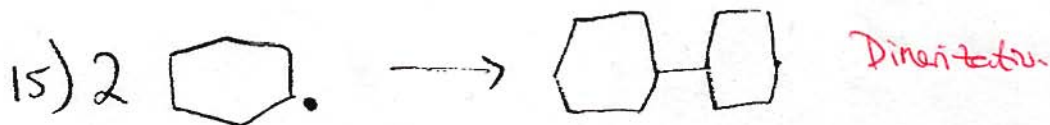
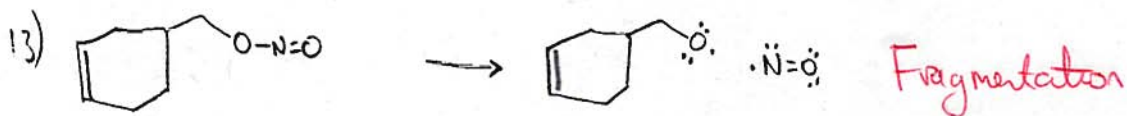
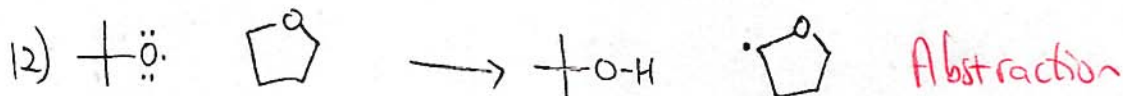
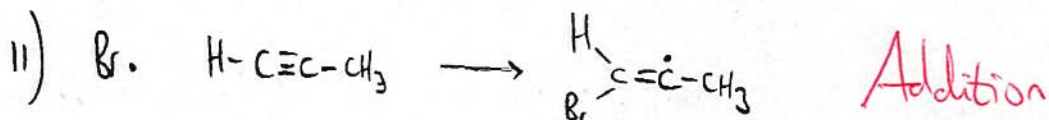
7) Which one of the above terms describes a process where a species undergoes both oxidation and reduction?

Disproportionation

8-10) Circle the most stable species in each threesome.



11-15) Identify each below reaction using the reaction types that start with A, A, D, D, and F.



16) Why are special measures taken to remove air from almost all radical reactions?

Oxygen (in the air) reacts with free radicals. $\text{R}\cdot + \text{O}_2 \rightarrow \text{R-O-O}\cdot$

17) What name is given to species which slow down or stop free radical reactions?

Free Radical Inhibitors

18) Name one gas commonly used as an inert atmosphere for radical reactions.

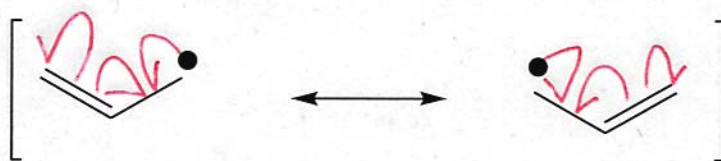
N_2 , Argon

19) What effect does increasing the solvent polarity have on the reaction rates of almost all radical reactions?

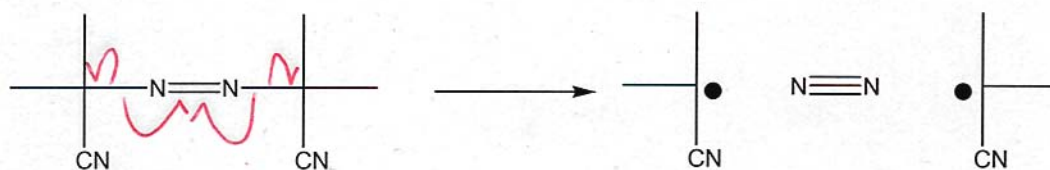
None

20-25) Use appropriate curly arrows to describe the electron movement for the following three processes.

20-21)



22-23)



24-25)

