QUESTION 1

For the following reactions indicated as 1, 2 and 3, which is the correct order of INCREASING rate of electrophilic aromatic substitution?

1. \[
\text{Ar} \quad \begin{array}{c}
\text{NO}_2 \\
\text{Cl}_2 \\
\text{AlCl}_3 \\
\end{array}
\]

2. \[
\text{Ar} \quad \begin{array}{c}
\text{NH}_2 \\
\text{Cl}_2 \\
\text{AlCl}_3 \\
\end{array}
\]

3. \[
\text{Ar} \quad \begin{array}{c}
\text{Cl} \\
\text{Cl}_2 \\
\text{AlCl}_3 \\
\end{array}
\]

A 1 (slowest) < 2 < 3 (fastest)
B 2 (slowest) < 3 < 1 (fastest)
C 1 (slowest) < 3 < 2 (fastest)
D 3 (slowest) < 2 < 1 (fastest)

QUESTION 2

Give the product of the following electrophilic aromatic substitution reaction

\[
\text{Ar} \quad \begin{array}{c}
\text{CN} \\
\text{HNO}_3/\text{H}_2\text{SO}_4 \\
\end{array}
\]

A   \[
\text{Ar} \quad \begin{array}{c}
\text{CN} \\
\end{array}
\]

B   \[
\text{Ar} \quad \begin{array}{c}
\text{CN} \\
\text{NO}_2 \\
\end{array}
\]

C   \[
\text{Ar} \quad \begin{array}{c}
\text{CN} \\
\text{O}_2\text{N} \\
\end{array}
\]

Do not give the answer D
QUESTION 3

MC321

Which of the following structures would undergo electrophilic aromatic substitution fastest?

A

B

C

D

QUESTION 4

MC32a

Which of the following is a possible (not necessarily most probable) product of the following reaction sequence?

1. \( \text{H}_3\text{CCOCl}/\text{AlCl}_3 \)
2. \( \text{HNO}_3/\text{H}_2\text{SO}_4 \)
3. \( \text{Zn/Hg/HCl/H}_2\text{O} \)
4. \( \text{Br}_2/\text{AlCl}_3 \)

A

B

C

D
QUESTION 5

MC32e

Which of the following is a possible (not necessarily most probable) product of the following reaction sequence?

1. CH₃CH₂COCl/FeBr₃
2. SO₃/H₂SO₄
3. Zn/Hg/HCl/H₂O
4. HNO₃/H₂O₄
5. Br₂/FeBr₃

QUESTION 6

MC32b

Which of the following is a possible (not necessarily most probable) product of the following reaction sequence?

1. H₃CCOCl/AlCl₃
2. Zn/Hg/HCl/H₂O
3. NBS/hv
4. Mg.THF
5. H₂O⁺
QUESTION 7
MC32k

For the following reactions indicated as 1, 2 and 3, which is the correct order of INCREASING rate of electrophilic aromatic substitution?

1  \[ \text{Cl}_2 / \text{AlCl}_3 \]

2  \[ \text{Cl}_2 / \text{AlCl}_3 \]

3  \[ \text{Cl}_2 / \text{AlCl}_3 \]

A  1 (slowest) < 2 < 3 (fastest)
B  2 (slowest) < 3 < 1 (fastest)
C  1 (slowest) < 3 < 2 (fastest)
D  3 (slowest) < 2 < 1 (fastest)

QUESTION 8
MC32q

Which is the correct IUPAC name for the following structure?

A  1-methyl-2-fluoro-6-nitrobenzene
B  2-fluoro-6-nitrotoluene
C  2-nitro-6-fluorotoluene
D  1-nitro-3-fluoro-2-methylbenzene
QUESTION 9
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes

I study hard to learn organic chemistry.

A   Never
B   Rarely
C   Sometimes
D   Often
E   Always

QUESTION 10
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes

I spend a lot of time learning organic chemistry.

A   Never
B   Rarely
C   Sometimes
D   Often
E   Always

QUESTION 11
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes

I put enough effort into learning organic chemistry.

A   Never
B   Rarely
C   Sometimes
D   Often
E   Always
QUESTION 12
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
I use strategies to learn organic chemistry well.

A  Never  
B  Rarely  
C  Sometimes  
D  Often  
E  Always  

 QUESTION 13
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
What overall final grade do you really need in this class (note that the question asks about the grade that you need, not the grade you want, these two may not be the same!)?
A  
B  
C  
D  

 QUESTION 14
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
As of today, what final grade would you be realistically willing to accept in this course
A  
B  
C  
D  