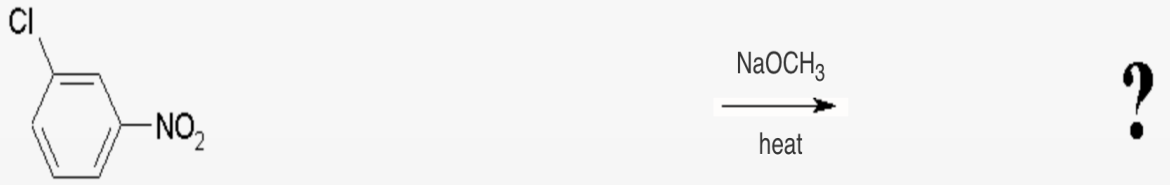
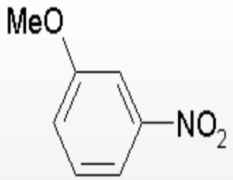
1 of 6

Give the major product of the following reaction.

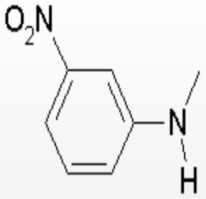
2016-09-16 Q1



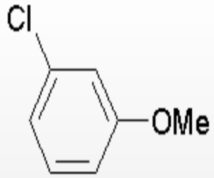
A



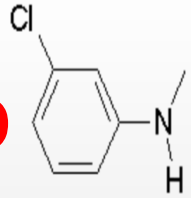
B



C

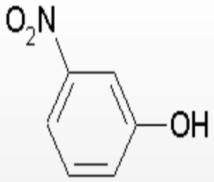


D

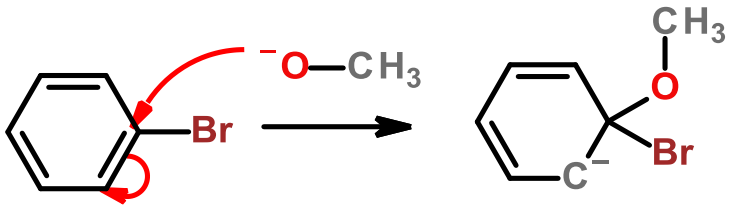


E There is no reaction under these conditions or the correct product is not listed here.

F



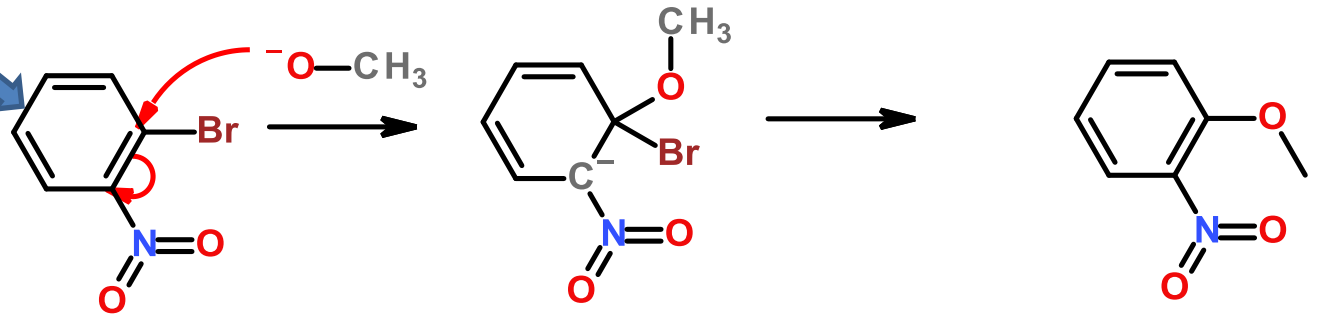
Examples: Nucleophilic Aromatic Substitution

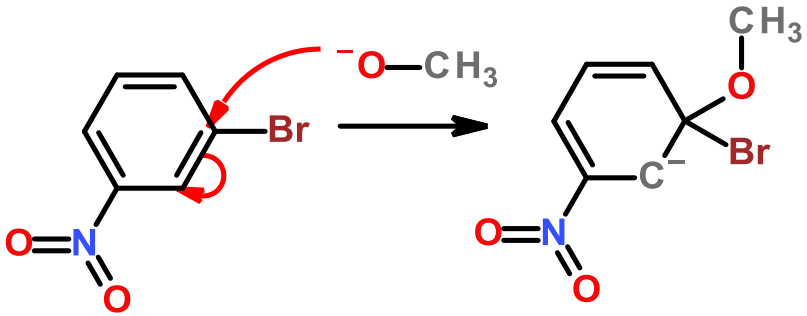


No Reaction!

Intermediate is too high in energy to form!

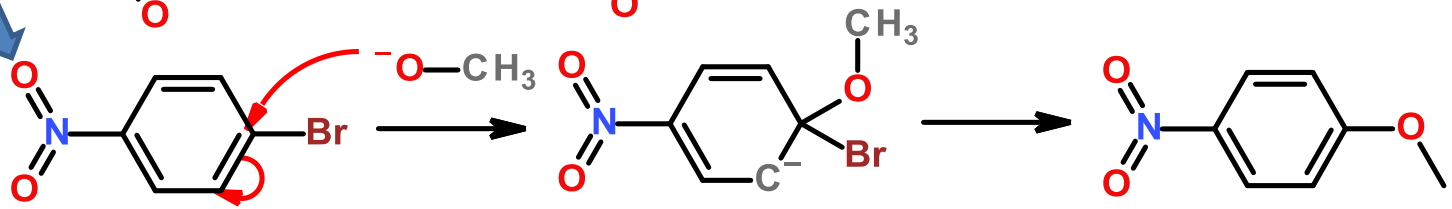
Intermediate is stabilized in exactly the right position to lower the intermediate energy to an accessible energy. A product is formed!





No Reaction!

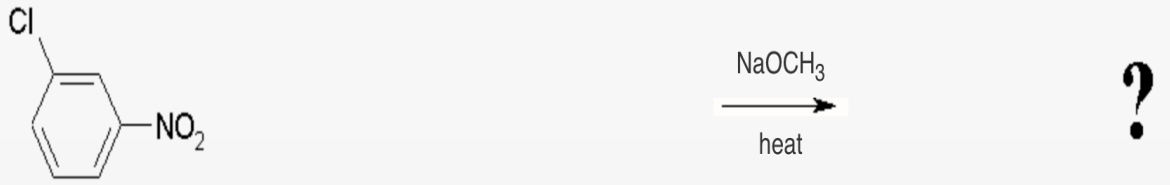
Intermediate is too high in energy to form!



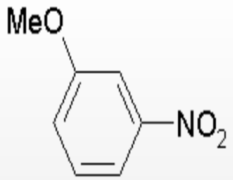
1 of 6

Give the major product of the following reaction.

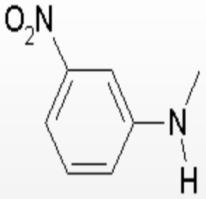
2016-09-16 Q1



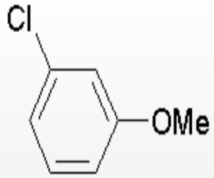
A



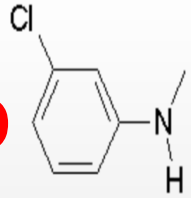
B



C

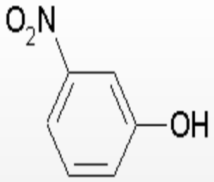


D



E There is no reaction under these conditions or the correct product is not listed here.

F



Exam 1

- **Time:**
  - **Tuesday, September 20: 7:00 – 9:00PM OR**
  - **Wednesday, September 21: 7:00 – 9:00PM OR**
  - **Thursday, September 22: 7:00 – 10:00PM**
- **Location – Soc/Anthro Testing Center**
  - Chapters will be covered in this order: Chapter 11, 14, 15, 19, 13
- **Practice Exams are Posted**
  - B7-19-98A Practice Exam 1A
  - B7-19-98B Practice Exam 1B
- **Deadline for alternate arrangements is Monday, 9/19/2016 at 4:30 PM (i.e., close of business)**
  - **An oral make-up exam will be required for making up the exam for all students not taking the exam on the above dates or having already made prior arrangements**

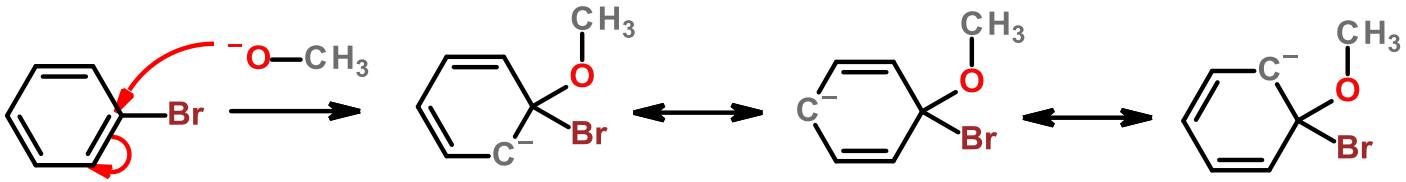
Order of Coverage (Exam 1)

	Homework Assignment	Due Date
1	B4-11-01 IR Functional Groups (wDeadline)	Tuesday, August 23
2	B7-14-02 Mass Spec - Molecular Ion (wDeadline)	Wednesday, August 24
3	B7-14-03 Mass Spec - Isotope Effects (wDeadline)	Thursday, August 25
4	B7-15-01 Number of Peaks 1H NMR Spectra (wDeadline)	Friday, August 26
5	B7-15-06 Number of Peaks 13C NMR (wDeadline)	Saturday, August 27
6	B7-15-02 Theoretical NMR Chemical Shift (wDeadline)	Sunday, August 28
7	B7-15-03 Theoretical NMR Integration (wDeadline)	Monday, August 29
8	B7-15-04 Theor. NMR Spin-Spin Splitting (wDeadline)	Tuesday, August 30
9	B7-15-05 NMR Spectroscopy Problems (wDeadline)	Wednesday, August 31
10	B7-15-07 13C NMR Structure ID (wDeadline)	Thursday, September 1
11	B7-13-01A Nomenclature Alkyl Halides (wDeadline)	Friday, September 2
12	B7-13-01B Alkyl Halide Nomenclature (wDeadline)	Saturday, September 3
13	B7-13-02A Halogenation of Alkanes (wDeadline)	Sunday, September 4
14	B7-13-02B Halogenation of Alkanes (wDeadline)	Monday, September 5

Order of Coverage (Exam 1)

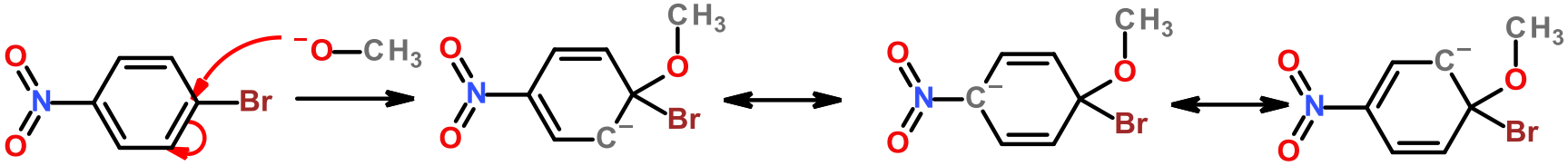
	Homework Assignment	Due Date
15	B7-13-03A Oxidation and Anti-oxidants (wDeadline)	Tuesday, September 6
16	B7-19-01 Aromaticity (wDeadline)	Wednesday, September 7
17	B7-19-02B Arene Nomenclature (wDeadline)	Thursday, September 8
18	B7-19-03A Halogenation of Arenes (wDeadline)	Friday, September 9
19	B7-19-03B Halogenation of Arenes (wDeadline)	Friday, September 9
20	B7-19-04A Arene Rxns Inorganic Acids (wDeadline)	Saturday, September 10
21	B7-19-04B Arene Rxns Inorganic Acids (wDeadline)	Saturday, September 10
22	B7-19-05A Friedel-Crafts (wDeadline)	Tuesday, September 13
23	B7-19-05B Friedel-Crafts (wDeadline)	Wednesday, September 14
24	B7-19-06 Arene Mechanistic Issues (wDeadline)	Thursday, September 15
25	B7-19-06B Arene Mechanisms (wDeadline)	Friday, September 16
26	B7-19-07A Nucleophilic Aromatic Subs (wDeadline)	Saturday, September 17
27	B7-19-07B Nucleophilic Aromatic Subs (wDeadline)	Sunday, September 18
	Exam 1	**September 20, 21, 22**

Nucleophilic Aromatic Substitution

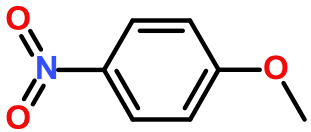


No Reaction!

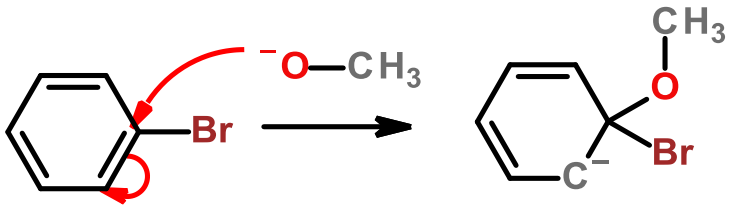
Intermediate is too high in energy to form!



Intermediate is stabilized in exactly the right position to lower the intermediate energy to an accessible energy. A product is formed!



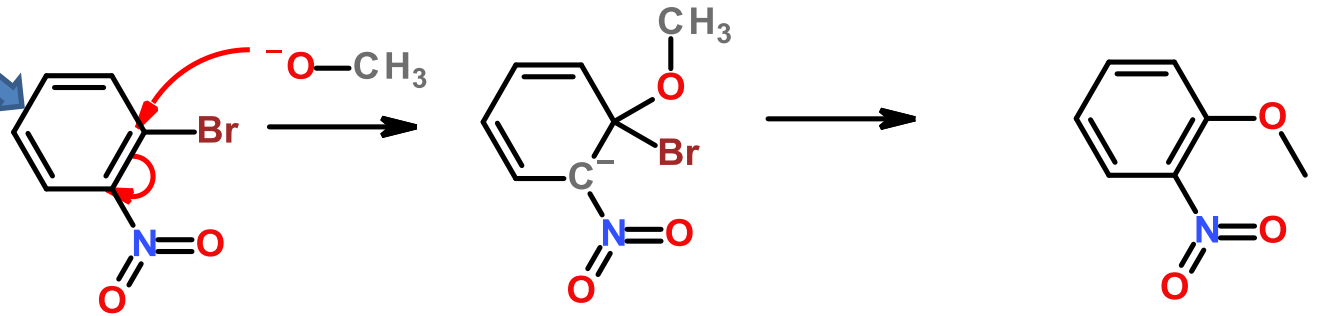
Examples: Nucleophilic Aromatic Substitution

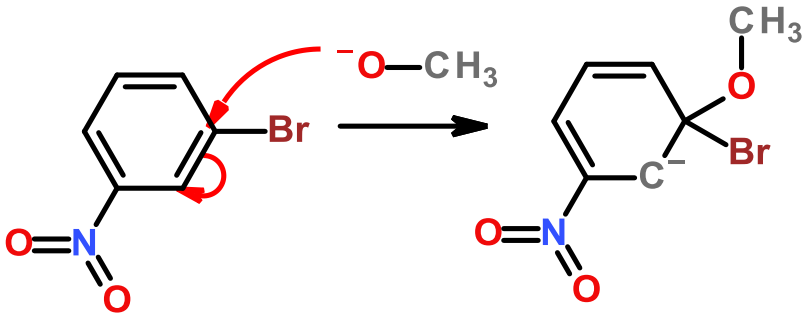


No Reaction!

Intermediate is too high in energy to form!

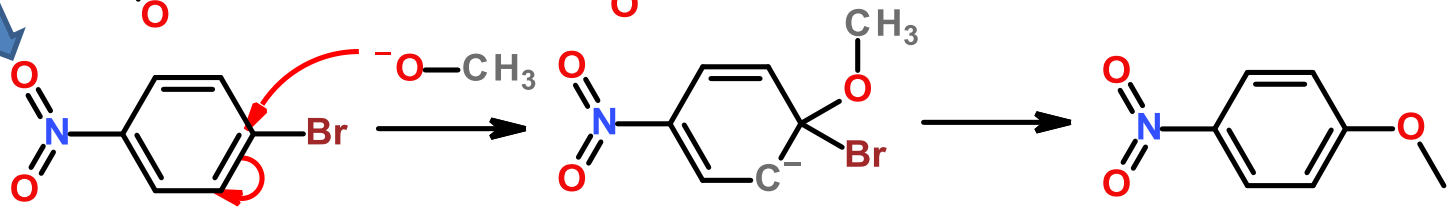
Intermediate is stabilized in exactly the right position to lower the intermediate energy to an accessible energy. A product is formed!



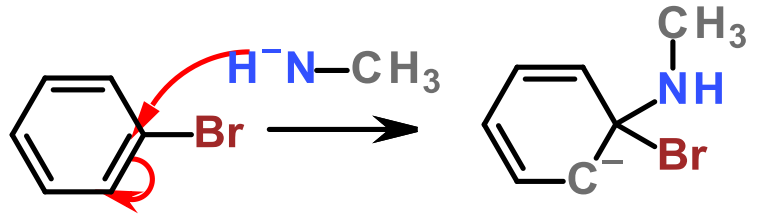


No Reaction!

Intermediate is too high in energy to form!



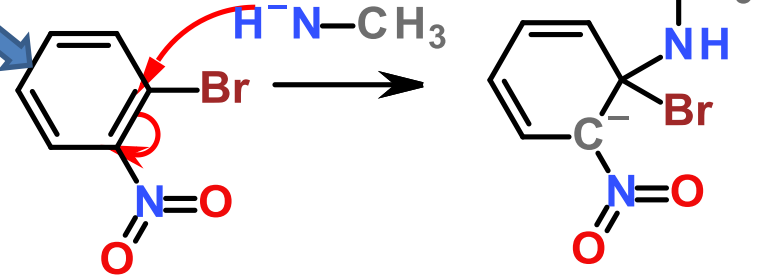
Examples: $NaNHCH_3$

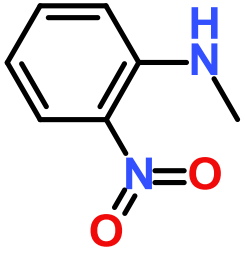


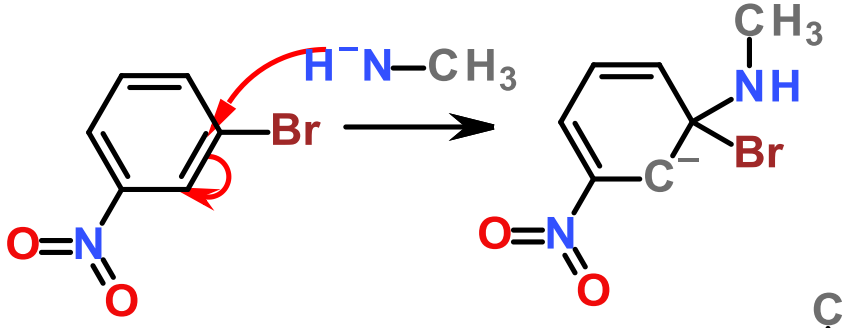
No Reaction!

Intermediate is too high in energy to form!

Intermediate is stabilized in exactly the right position to lower the intermediate energy to an accessible energy. A product is formed!

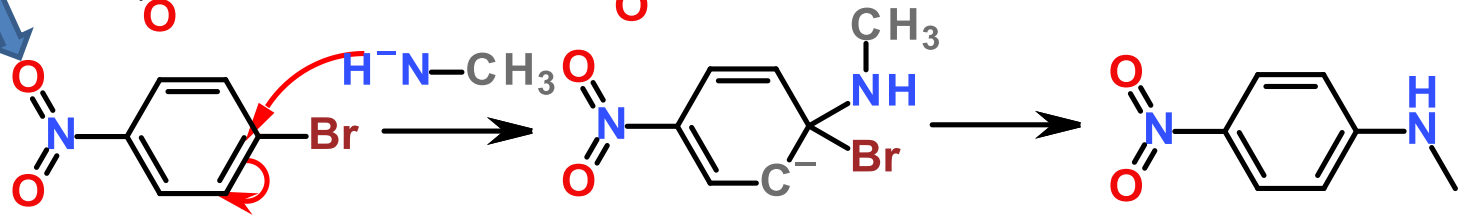




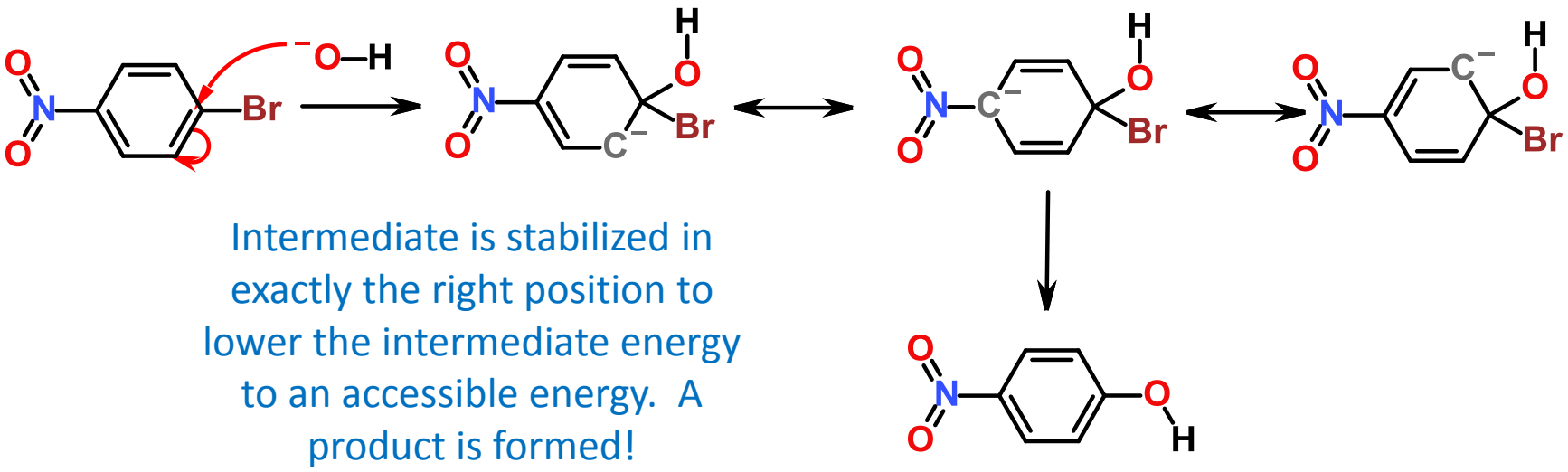


No Reaction!

Intermediate is too high in energy to form!

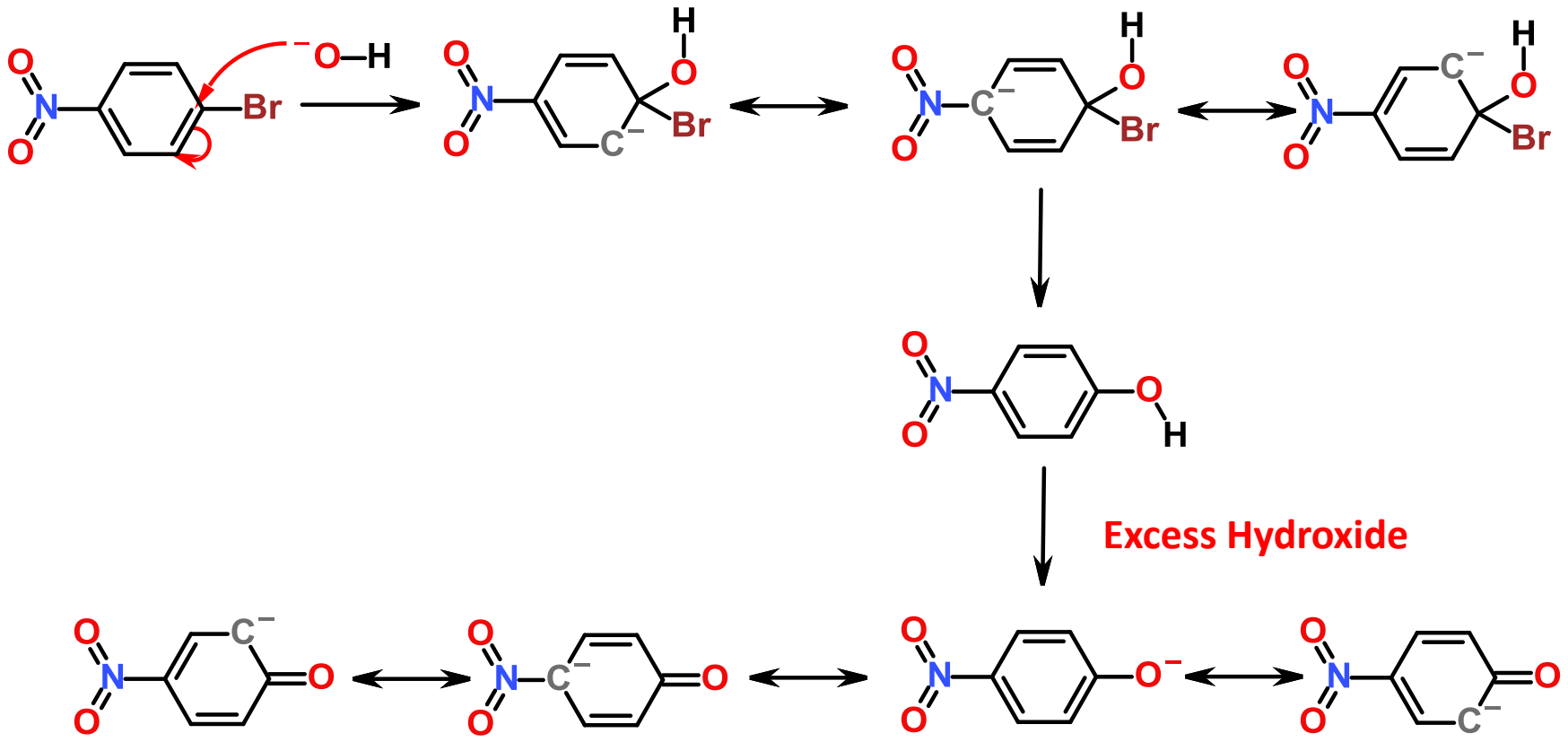


Examples: Hydroxide

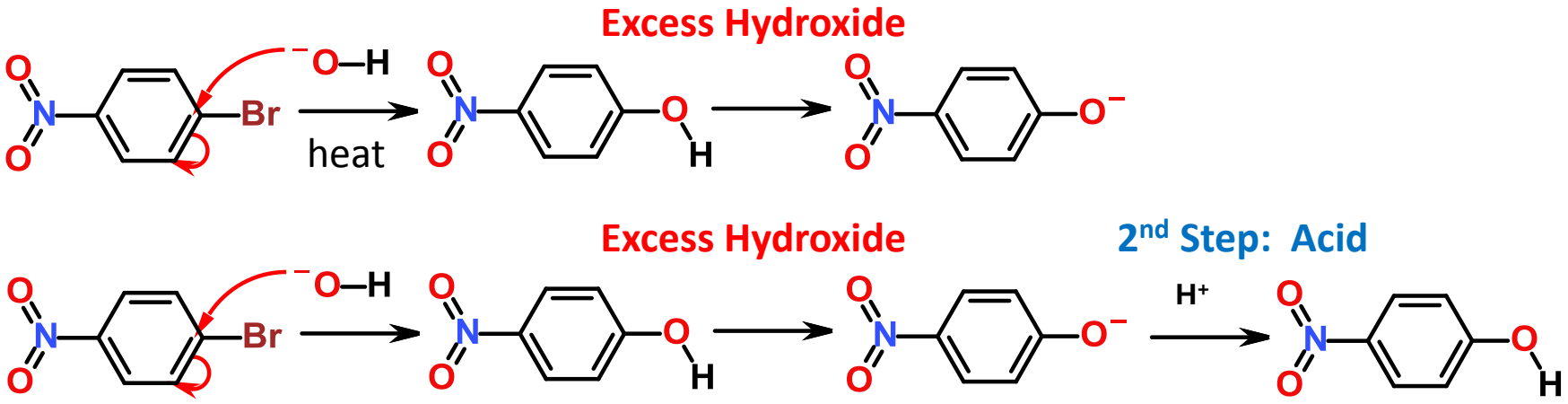


Intermediate is stabilized in exactly the right position to lower the intermediate energy to an accessible energy. A product is formed!

Examples: Hydroxide



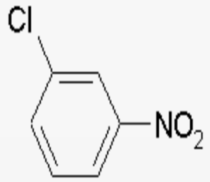
Examples: Hydroxide



2 of 6

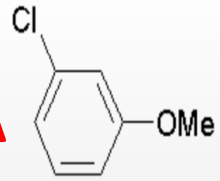
2016-09-16 Q2

Give the major product of the following reaction.

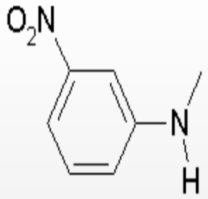


$\xrightarrow[\text{heat}]{NaNHCH_3}$?

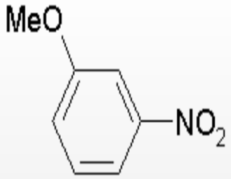
A



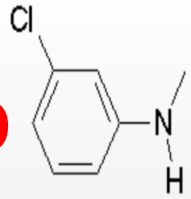
B



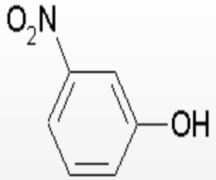
C



D



E

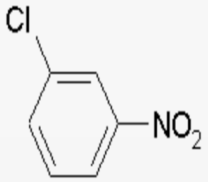


F There is no reaction under these conditions or the correct product is not listed here.

2 of 6

Give the major product of the following reaction.

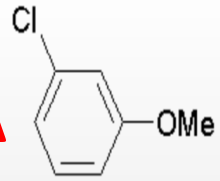
2016-09-16 Q2



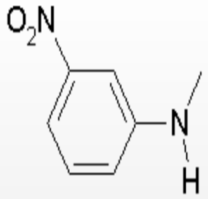
$NaNHCH_3$ → heat

?

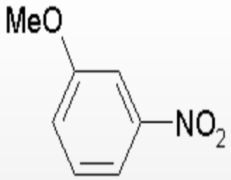
A



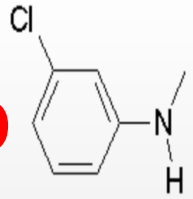
B



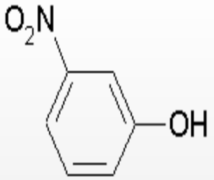
C



D



E

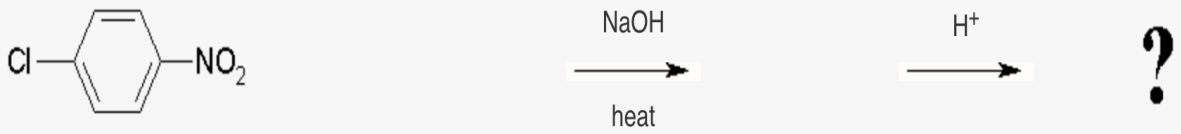


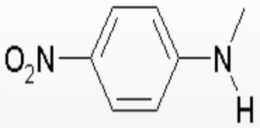
F There is no reaction under these conditions or the correct product is not listed here.

3 of 6

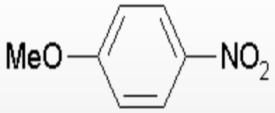
2016-09-16 Q3

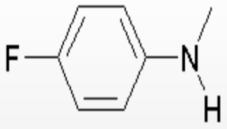
Give the major product of the following reaction.

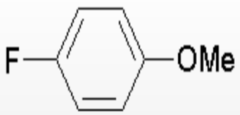


A 

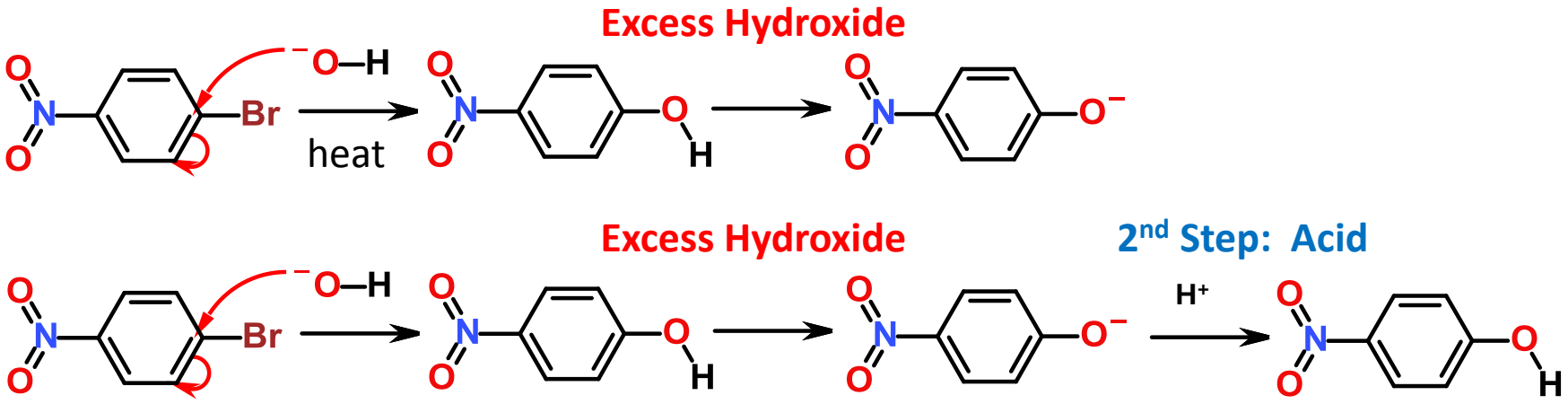
B There is no reaction under these conditions or the correct answer is not listed here.

C 

D 

E 

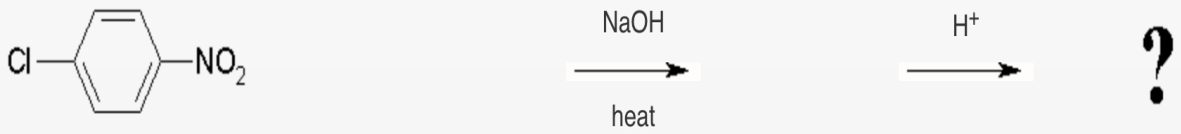
Examples: Hydroxide

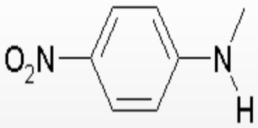


3 of 6

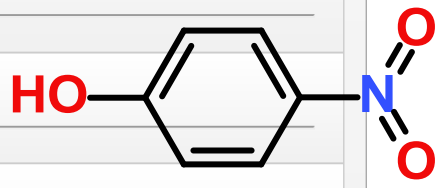
2016-09-16 Q3

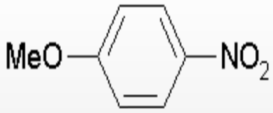
Give the major product of the following reaction.

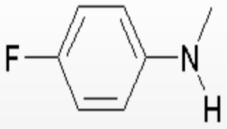


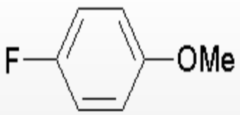
A 

B There is no reaction under these conditions / the correct answer is not listed here.

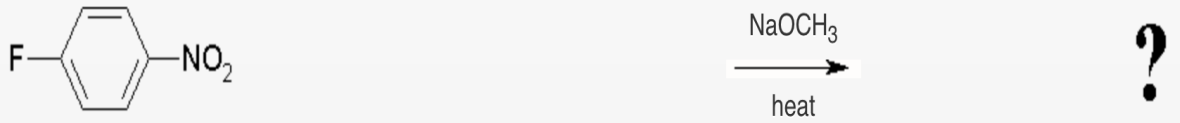


C 

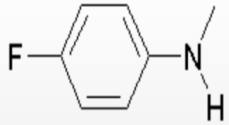
D 

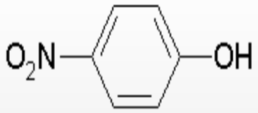
E 

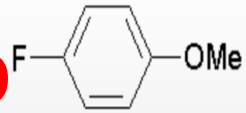
Give the major product of the following reaction.

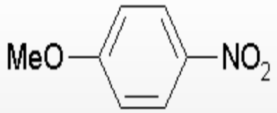


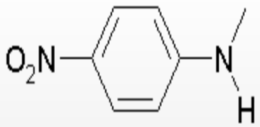
A There is no reaction under these conditions or the correct product is not listed here.

B 

C 

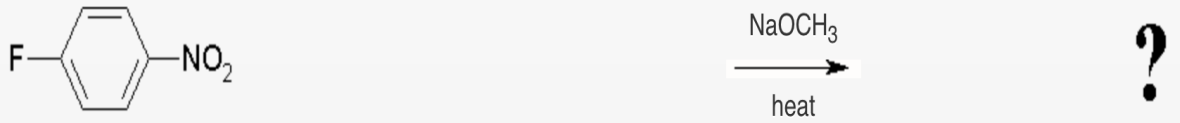
D 

E 

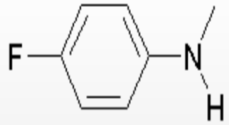
F 

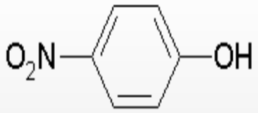
2016-09-16 Q4

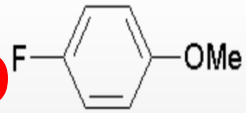
Give the major product of the following reaction.

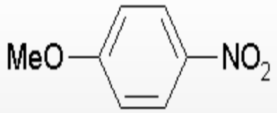


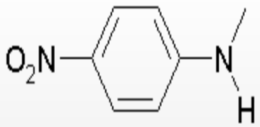
A There is no reaction under these conditions or the correct product is not listed here.

B 

C 

D 

E 

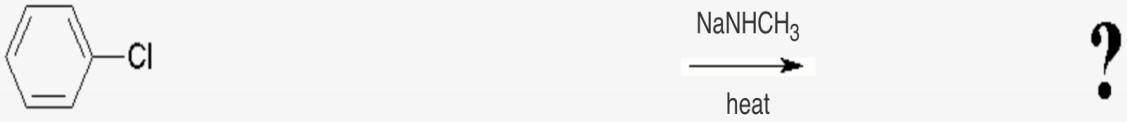
F 

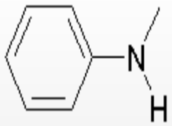
2016-09-16 Q4

2016-09-16 Q5

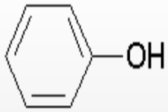
6 of 6

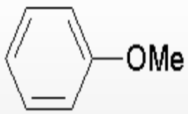
Give the major product of the following reaction.



A 

B There is no reaction under these conditions or the correct product is not listed here.

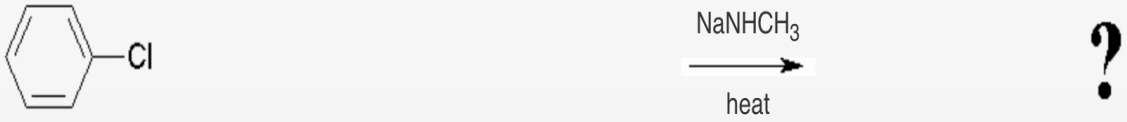
C 

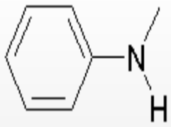
D 

2016-09-16 Q5

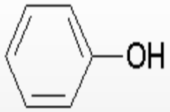
6 of 6

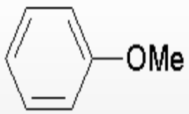
Give the major product of the following reaction.



A 

B There is no reaction under these conditions or the correct product is not listed here.

C 

D 

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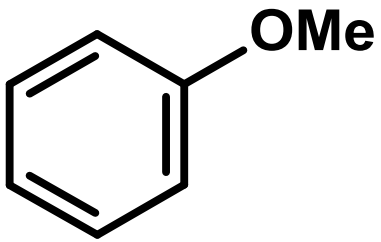
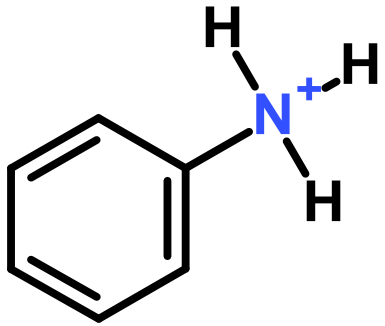
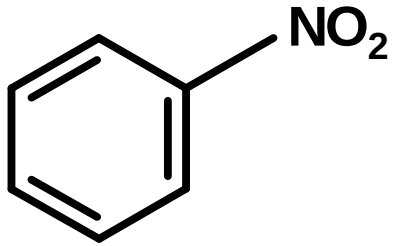
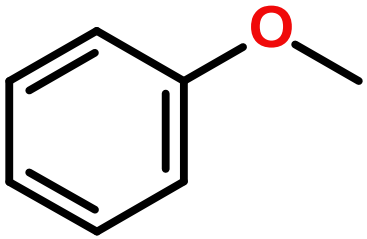
END OF MATERIAL FOR EXAM 1

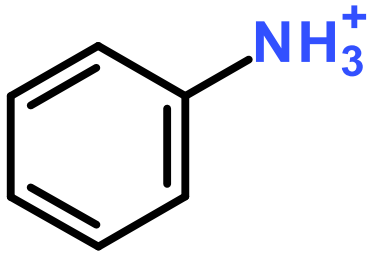


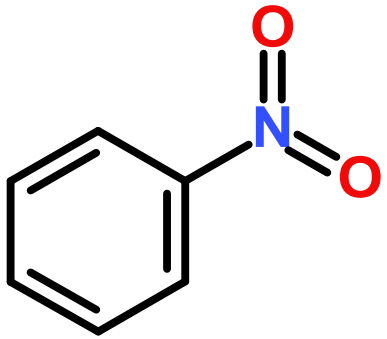




Technically correct, but graded incorrect by the computer







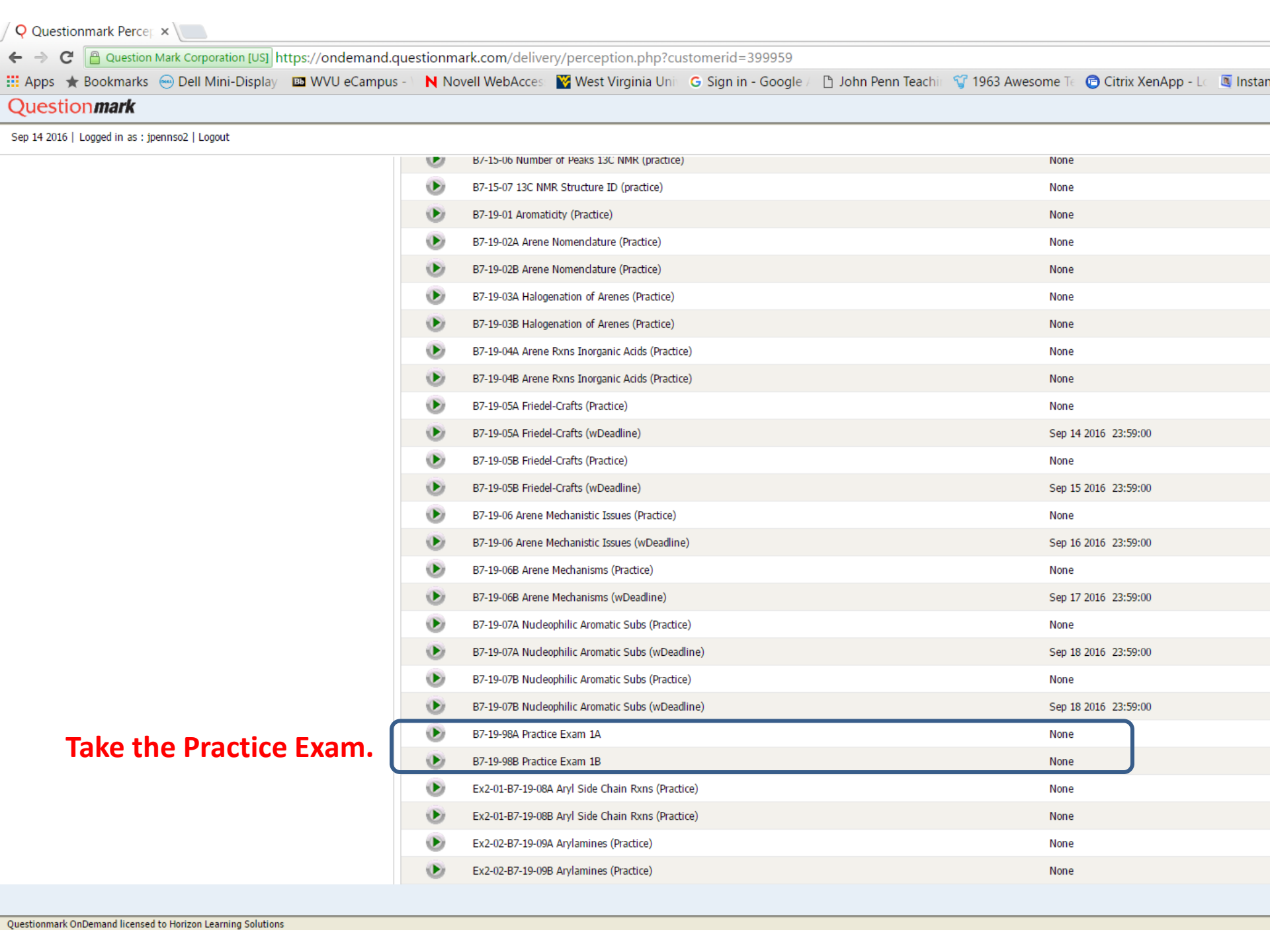
Hints for the Exam!

Correct!

DON'T USE THE X-BUTTON!

How to Study for the Exam

- Take the Practice Exam
- Submit for grading
- View Reports
- Find the sections where you missed questions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Questionmark
Sep 14 2016 | Logged in as : jpennso2 | Logout
B7-15-06 Number of Peaks 13C NMR (practice) None
B7-15-07 13C NMR Structure ID (practice) None
B7-19-01 Aromaticity (Practice) None
B7-19-02A Arene Nomenclature (Practice) None
B7-19-02B Arene Nomenclature (Practice) None
B7-19-03A Halogenation of Arenes (Practice) None
B7-19-03B Halogenation of Arenes (Practice) None
B7-19-04A Arene Rxns Inorganic Acids (Practice) None
B7-19-04B Arene Rxns Inorganic Acids (Practice) None
B7-19-05A Friedel-Crafts (Practice) None
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B7-19-05B Friedel-Crafts (Practice) None
B7-19-05B Friedel-Crafts (wDeadline) Sep 15 2016 23:59:00
B7-19-06 Arene Mechanistic Issues (Practice) None
B7-19-06 Arene Mechanistic Issues (wDeadline) Sep 16 2016 23:59:00
B7-19-06B Arene Mechanisms (Practice) None
B7-19-06B Arene Mechanisms (wDeadline) Sep 17 2016 23:59:00
B7-19-07A Nucleophilic Aromatic Subs (Practice) None
B7-19-07A Nucleophilic Aromatic Subs (wDeadline) Sep 18 2016 23:59:00
B7-19-07B Nucleophilic Aromatic Subs (Practice) None
B7-19-07B Nucleophilic Aromatic Subs (wDeadline) Sep 18 2016 23:59:00
B7-19-98A Practice Exam 1A None
B7-19-98B Practice Exam 1B None
Ex2-01-B7-19-08A Aryl Side Chain Rxns (Practice) None
Ex2-01-B7-19-08B Aryl Side Chain Rxns (Practice) None
Ex2-02-B7-19-09A Arylamines (Practice) None
Ex2-02-B7-19-09B Arylamines (Practice) None
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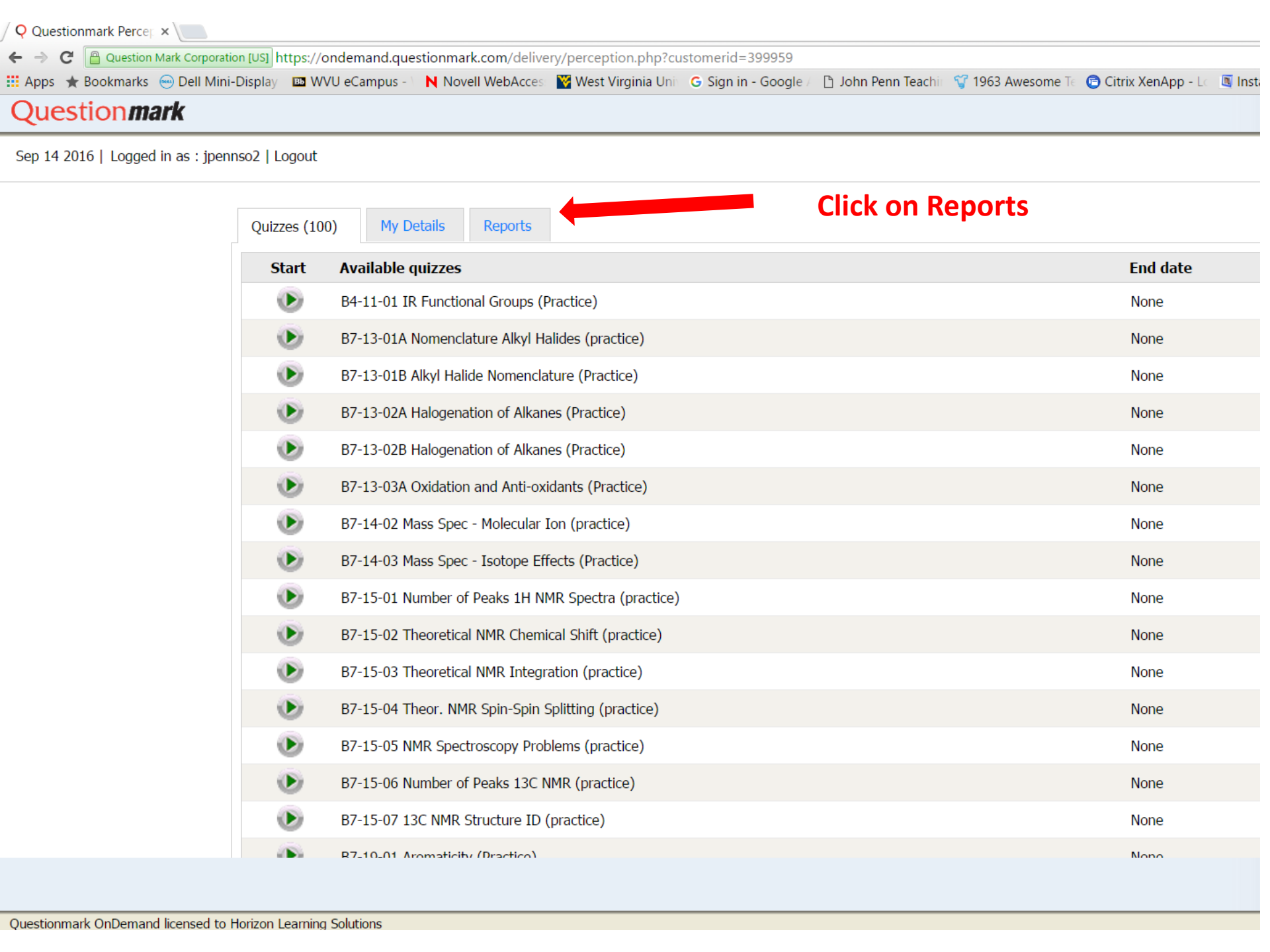
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Quizzes (100)
My Details
Reports
Click on Reports
Start
Available quizzes
End date
B4-11-01 IR Functional Groups (Practice) None
B7-13-01A Nomenclature Alkyl Halides (practice) None
B7-13-01B Alkyl Halide Nomenclature (Practice) None
B7-13-02A Halogenation of Alkanes (Practice) None
B7-13-02B Halogenation of Alkanes (Practice) None
B7-13-03A Oxidation and Anti-oxidants (Practice) None
B7-14-02 Mass Spec - Molecular Ion (practice) None
B7-14-03 Mass Spec - Isotope Effects (Practice) None
B7-15-01 Number of Peaks 1H NMR Spectra (practice) None
B7-15-02 Theoretical NMR Chemical Shift (practice) None
B7-15-03 Theoretical NMR Integration (practice) None
B7-15-04 Theor. NMR Spin-Spin Splitting (practice) None
B7-15-05 NMR Spectroscopy Problems (practice) None
B7-15-06 Number of Peaks 13C NMR (practice) None
B7-15-07 13C NMR Structure ID (practice) None
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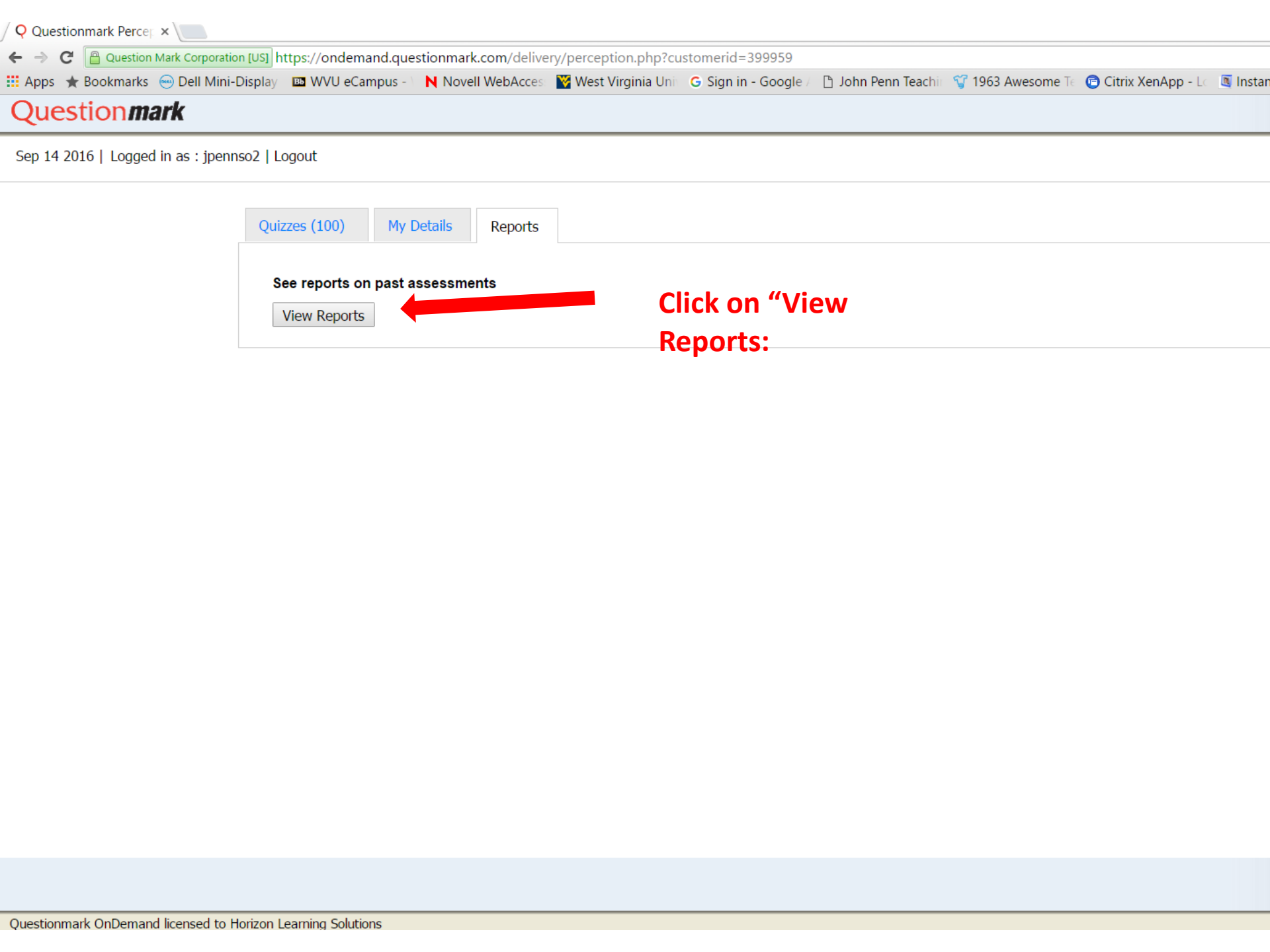
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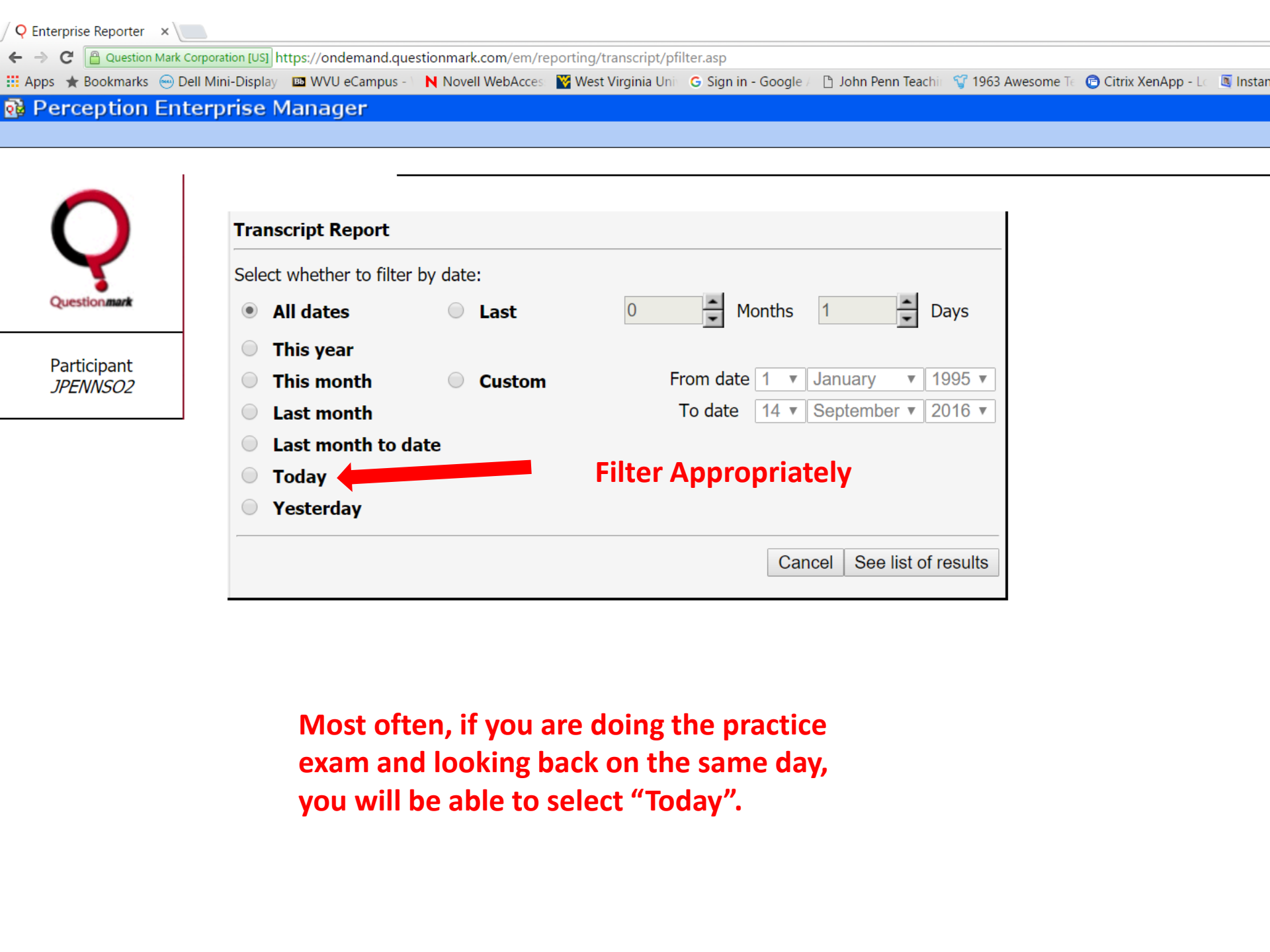

Most often, if you are doing the practice exam and looking back on the same day, you will be able to select "Today".

Enterprise Reporter

Question Mark Corporation [US] https://ondemand.questionmark.com/em/reporting/transcript/pfilter.asp

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Transcript report

Participant: JPENNSO2

Report generated: September 14, 2016 - 20:43

Filters for this report

Filter on date : Today

Coaching report	Assessment name	Status	Date/time finished	Total score	Maximum score	Percentage score	Time taken	Assessmen lab
	B7-19-05B Friedel-Crafts (Practice)	Finished normally	September 14, 2016 - 13:37	10	10	100%	0:18:54	Feedback
	B7-19-05B Friedel-Crafts (Practice)	Finished normally	September 14, 2016 - 13:45	0	10	0%	0:07:43	Feedback
	B7-19-98A Practice Exam 1A	Finished normally	September 14, 2016 - 20:43	0	32	0%	0:00:11	Feedback

Click on the magnifying glass to pull up answers for the assignment!

View the Results of the Assessment

Enterprise Reporter | View and Edit

Question Mark Corporation [US] https://ondemand.questionmark.com/em/modules/ERC/CRPreview.aspx?From=ASP&ResultID=1203543908&TemplateID=10217&da=2&digest=6640e1f4f37ebe0c54e48363ef661cedf9b793df956aa5891bc86

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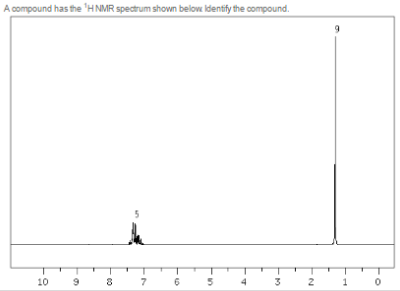
Coaching Report

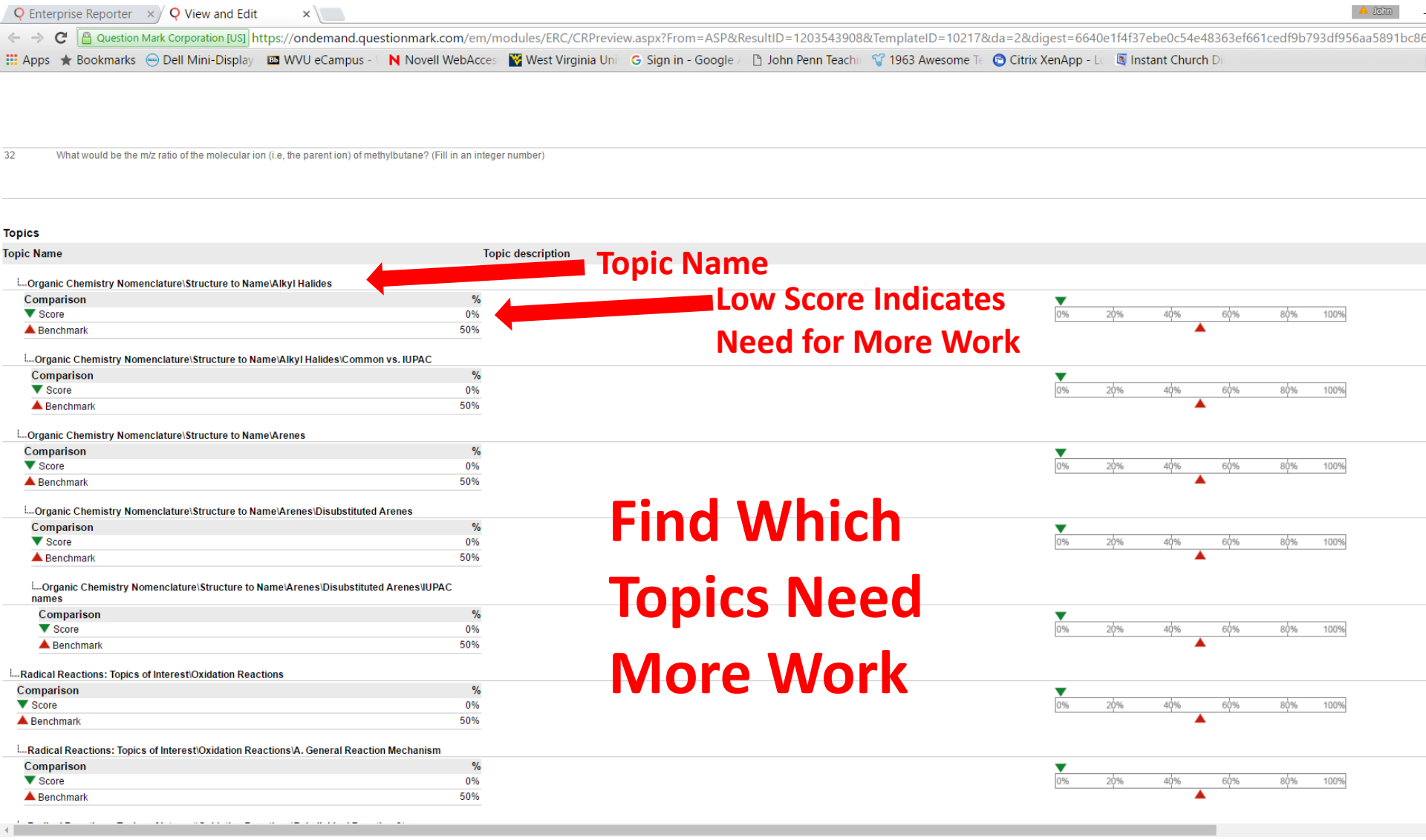
Assessment type	Quiz	Status	Finished
Participant name	jpennso2	Total score	0
Participant group	Penn Organic Semester 2	Maximum score	32
Assessment name	B7-19-98A Practice Exam 1A	Percentage score	0%
Date/time started	Sep 14 2016 20:43:07	Assessment outcome label	Feedback
Date/time finished	Sep 14 2016 20:43:20		

Questions

Question number	Question wording	Answer given (truncated)	Feedback shown	Actual score	Maximum score
1	Which of the following reactions is/are the initiation step(s) in the radical chain autoxidation mechanism leading to the destruction of biological molecules in the tissues?		The currently accepted overall mechanism for the autoxidation reaction of O_2 with alkanes is: **Initiation Reaction** $O_2 + RH \longrightarrow HOO\cdot + R\cdot$ **Propogation Reactions** $R\cdot + O_2 \longrightarrow ROO\cdot$ $ROO\cdot + RH \longrightarrow R\cdot + ROOH$ **Termination Reaction** $R\cdot + R\cdot \longrightarrow RR$ **Overall Reaction** $RH + O_2 \longrightarrow ROOH \longrightarrow ROH$ The correct answer is $O_2 + RH \longrightarrow HOO\cdot + R\cdot$	0	1
2	A compound has the ^1H NMR spectrum shown below. Identify the compound. 		Starting with the aryl hydrogens, since they are easy to identify, the multiplet at 7.2 δ which integrates for 5 H indicates a monosubstituted aromatic compound. The 9 H singlet at 1.3 δ indicates by chemical shift and integration that the unknown groups are 3 equivalent CH_3 groups (e.g., a t-butyl group). With these 2 pieces, the only possible answer is t-butyl benzene. The correct answer is 	0	1
3	A compound has the molecular formula of C_4H_8O. It exhibits 4 peaks in its ^1H NMR spectrum. These peaks are (in δ): 9.8 (1H, t), 2.4 (2H, m), 1.6 (2H, m), 1.0 (3H, t). Which of the following compounds is consistent with this data?		The first issue to consider is the number of double bond equivalents. # DBE = 1 + # Carbons atoms - $\frac{\text{\# Hydrogen atoms}}{2}$ With this molecular formula, we find 1 double bond equivalent, which means either 1 ring or 1 double bond. Working our way from the smallest δ numbers, the first peak to consider is the 3H triplet at 1.0 δ, which can be readily interpreted as a CH_2CH_3 group. The 1H triplet at 9.8 δ indicates an CH_2CHO group. The 2H multiplets at 1.6 and 2.4 δ indicate individual CH_2 groups that contain multiple CH groups on either side of the CH_2 group. When we put these pieces of the puzzle together, there is only one possible structure (i.e., butanal). 	0	1

Here's the top of the "View Assessment" page

Scroll Down to Reveal Topic Analysis



Take the Practice Exam!

The correlation between scores on the Practice Exam and the Real Exam are very high!!!!!!