

## Preview Assessment: Workshop 2

Name Workshop 2

### Instructions

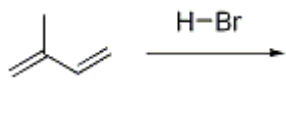
**Multiple Attempts** This Test allows multiple attempts.

**Force Completion** This Test can be saved and resumed later.

### ▼ Question Completion Status:

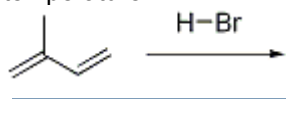
**Question 1** **1 points** [Save](#)

Draw the structure of the main product of the following reaction at low temperature:



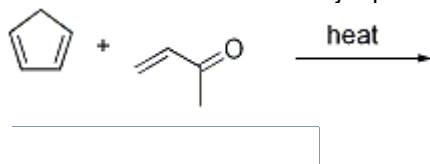
**Question 2** **1 points** [Save](#)

Draw the structure of the main product of the same reaction in Question 1 at high temperature:



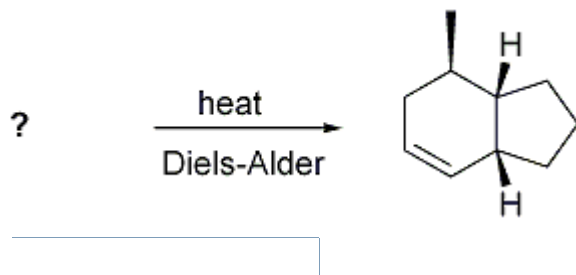
**Question 3** **1 points** [Save](#)

Draw the structure of the major product of the following reaction:



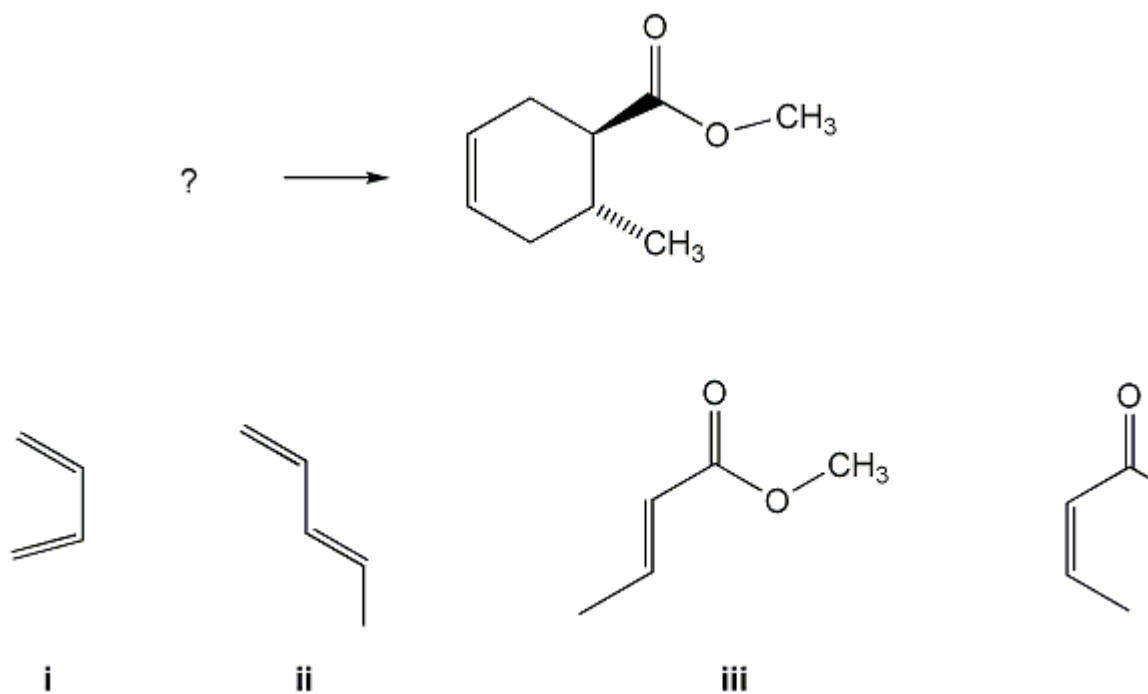
**Question 4** **1 points** [Save](#)

Draw the structure of the reactant(s) that would produce the following product:



**Question 5**

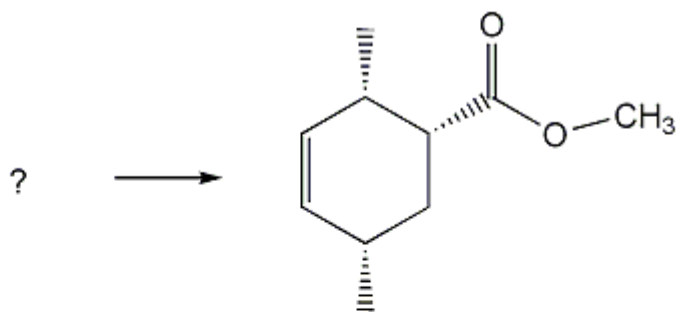
What are the diene and dienophile that would produce the following Diels-Alder product?



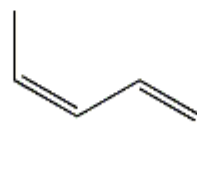
- i + ii
- i + iii
- i + iv
- ii + iii
- ii + iv

**Question 6**

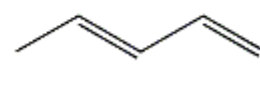
What are the diene and dienophile that would produce the following Diels-Alder product?



i



ii

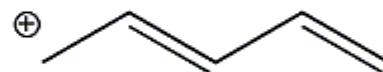
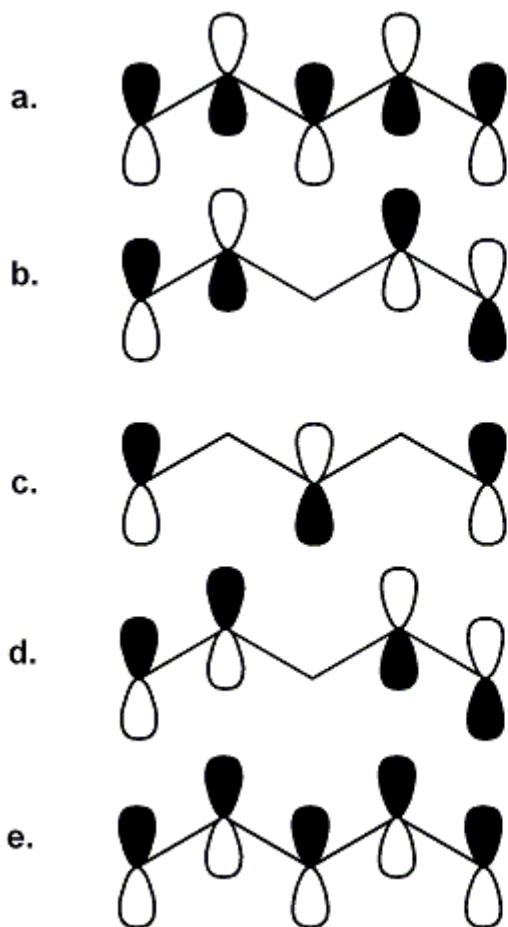


iii

- i + iv  
 ii + iv  
 iii + iv

**Question 7**

Look at Part 2 of Workshop 1 for an example of an energy level diagram. Draw an energy level diagram for the pi molecular orbitals of pentadienyl cation. Draw a sketch of each MO and indicate which energy level contains the HOMO of pentadienyl cation?



- a
- b
- c
- d
- e

**Question 8**

1 points [Save](#)

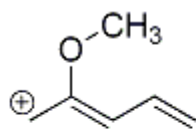
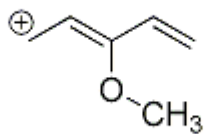
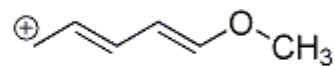
Which diagram in Question 7 represents the LUMO of pentadienyl cation?

- a
- b
- c
- d
- e

**Question 9**

1 points [Sa](#)

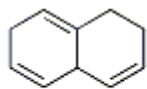
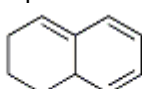
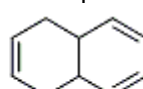
Which of the carbocations shown below would you expect to be the most stable?

**a****b****c**

- a  
 b  
 c

**Question 10****1 points**[Save](#)

Predict the order of the following compounds with respect to **increasing** wavelength of their  $\pi \rightarrow \pi^*$  absorptions in the UV-visible spectrum?

**a****b****c**

- a < b < c  
 a < c < b  
 b < a < c  
 b < c < a  
 c < a < b

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