

Question 1

Correct

Mark 1.00 out of 1.00

In which of these cases does the central atom have a zero formal charge?

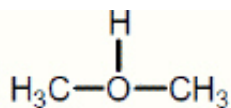
Select one:

☐

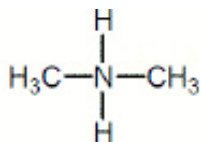
a.

☐

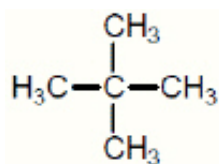
b.

☐

c.

☒

d.

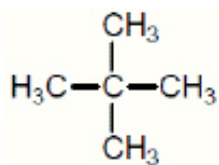


Doğru

☐

e. HFH

The correct answer is:

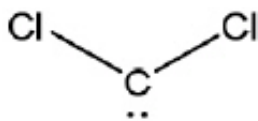


Question 2

Incorrect

Mark 0.00 out of 1.00

What is the formal charge on carbon in the following structure?



Select one:

- ☒ a. +2
- ☐ b. 0
- ☐ c. +1
- ☐ d. -2
- ☐ e. -1

✗ Yanlış

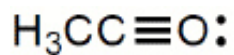
The correct answer is: 0

Question 3

Correct

Mark 1.00 out of 1.00

What is the formal charge on oxygen in the following structure?



Select one:

- ☐ a. +2
- ☐ b. 0
- ☒ c. +1
- ☐ d. -2
- ☐ e. -1

✓ Doğru

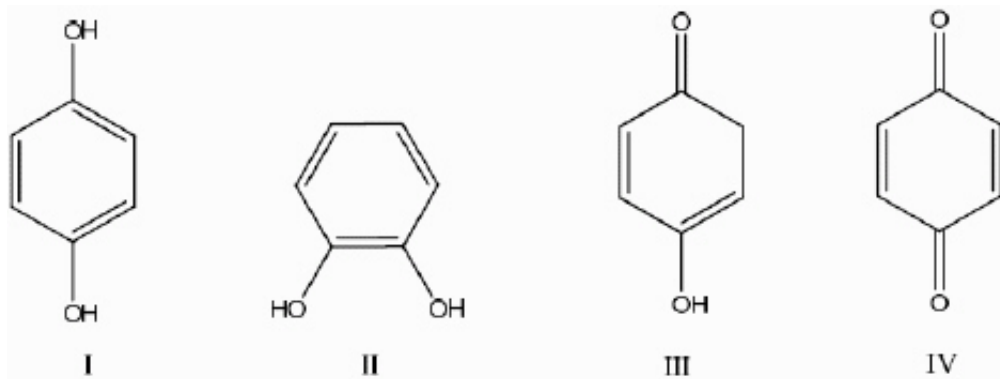
The correct answer is: +1

Question 4

Correct

Mark 1.00 out of 1.00

Which of the following compounds is not a constitutional isomer of the others?



Select one:

- ☒ a. IV
- ☐ b. All of these choices are constitutional isomers.
- ☐ c. I
- ☐ d. III
- ☐ e. II

✓ Doğru

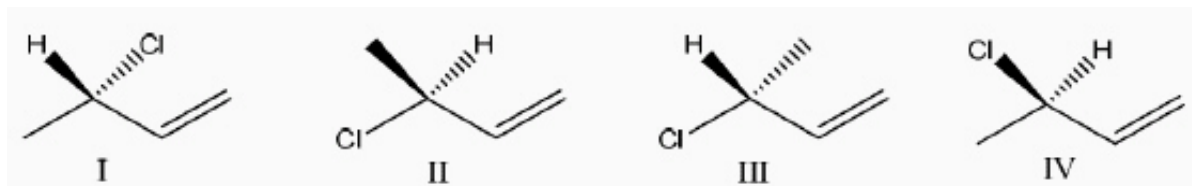
The correct answer is: IV

Question 5

Correct

Mark 1.00 out of 1.00

Which of the following structure is an acceptable bond line formula for $\text{CH}_3\text{CHClCHCH}_2$?



Select one:

- ☐ a. II and III
- ☐ b. I
- ☐ c. I, II, and III
- ☒ d. All of these choices.
- ☐ e. I and IV

✓ Doğru

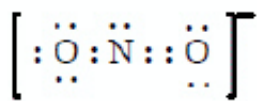
The correct answer is: All of these choices.

Question 6

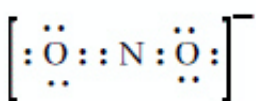
Incorrect

Mark 0.00 out of 1.00

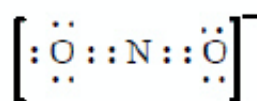
Which of these is a correct electron-dot representation of the nitrite ion, NO_2^- ?



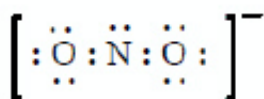
I



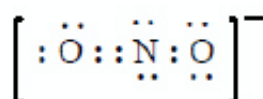
II



III



IV



V

Select one:

- ☐ a. I
- ☒ b. V
- ☐ c. IV
- ☐ d. II
- ☐ e. III

✗ Yanlış

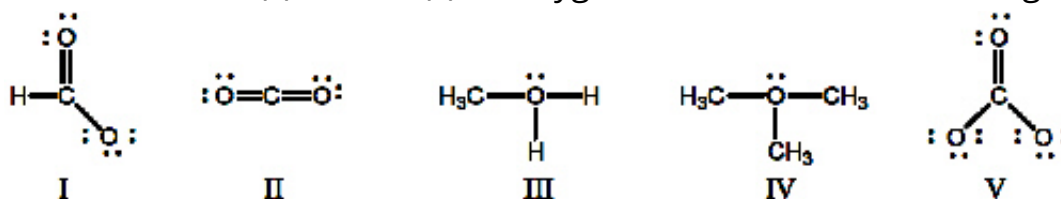
The correct answer is: I

Question 7

Correct

Mark 1.00 out of 1.00

Which structure(s) contain(s) an oxygen that bears a formal charge of +1?



Select one:

- ☐ a. II
- ☒ b. III and IV
- ☐ c. I and V
- ☐ d. V
- ☐ e. I and II

✓ Doğru

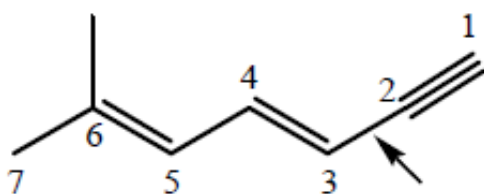
The correct answer is: III and IV

Question 8

Correct

Mark 1.00 out of 1.00

Identify the hybridized orbitals involved in the C-2---C-3 sigma bond (indicated by an arrow) in the following molecule: (while writing the orbitals separate them with a comma)



Answer: Sp2- sp



The correct answer is: sp, sp2

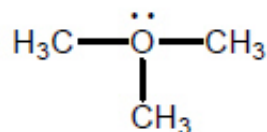
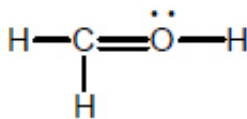
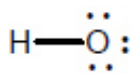
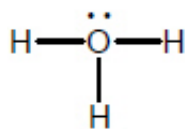
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Question 9

Correct

Mark 1.00 out of 1.00

In which structure(s) below does the oxygen have a formal charge of +1?



Select one:

- ☐ a. II only
- ☐ b. I and IV
- ☐ c. I only
- ☐ d. I and III
- ☒ e. I, III, and IV

✓ Doğru

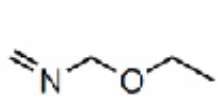
The correct answer is: I, III, and IV

Question 10

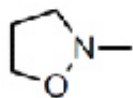
Correct

Mark 1.00 out of 1.00

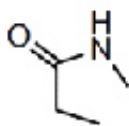
Which compound is not a constitutional isomer of the others?



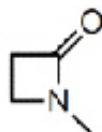
I



II



III



IV

Select one:

- ☐ a. II
- ☐ b. I
- ☐ c. All of these choices are isomers of each other.
- ☐ d. III
- ☒ e. IV

✓ Doğru

The correct answer is: IV