
Started on Friday, 8 April 2022, 1:15 PM

State Finished

Completed on Friday, 8 April 2022, 1:41 PM

Time taken 25 mins 27 secs

Grade 40.00 out of 100.00

Question 1

Correct Mark 10.00 out of 10.00

What is the conjugate base of ethanol ($\text{CH}_3\text{CH}_2\text{OH}$)?

- ☒ a. $\text{CH}_3\text{CH}_2\text{O}^-$
- ☐ b. CH_3OCH_3
- ☐ c. CH_3CH_3
- ☐ d. CH_3CH_2^-
- ☐ e. $\text{CH}_3\text{CH}_2\text{OH}_2^+$

✓ Doğru

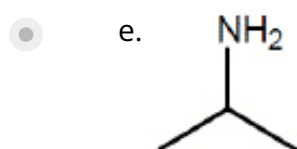
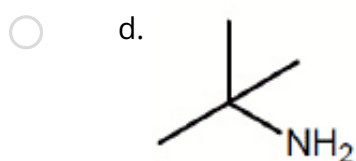
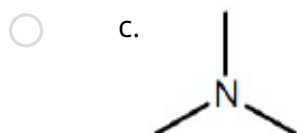
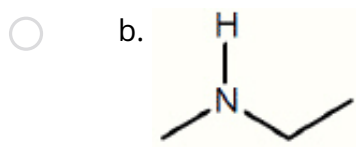
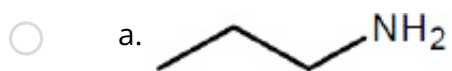
The correct answer is: $\text{CH}_3\text{CH}_2\text{O}^-$

Question 2

Incorrect

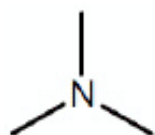
Mark 0.00 out of 10.00

Which compound would you expect to have the lowest boiling point?



✗ Yanlış

The correct answer is:



Question 3

Incorrect

Mark 0.00 out of 10.00

Which of the acids below would have the strongest conjugate base?

- ☐ a. $\text{ClCH}_2\text{CO}_2\text{H}$ $\text{pK}_a = 2.81$
- ☒ b. $\text{CH}_3\text{CO}_2\text{H}$ $\text{pK}_a = 4.75$
- ☐ c. $\text{CH}_3\text{CH}_2\text{OH}$ $\text{pK}_a = 18$
- ☐ d. $\text{Cl}_3\text{CCO}_2\text{H}$ $\text{pK}_a = 0.66$
- ☐ e. $\text{Cl}_2\text{CHCO}_2\text{H}$ $\text{pK}_a = 1.29$

✗ Yanlış

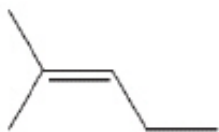
The correct answer is: $\text{CH}_3\text{CH}_2\text{OH}$ $\text{pK}_a = 18$

Question 4

Incorrect

Mark 0.00 out of 10.00

Which is the correct molecular formula of the following molecule?



- ☒ a. C_6H_{14}
- ☐ b. C_5H_{10}
- ☐ c. C_7H_{14}
- ☐ d. C_7H_{16}
- ☐ e. C_6H_{12}

✗ Yanlış

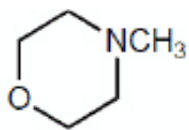
The correct answer is: C_6H_{12}

Question 5

Correct

Mark 10.00 out of 10.00

What functional group(s) is/are present in the following compound?



- ☐ a. ether and 2° amine
- ☐ b. ester and 3° amine
- ☐ c. 3° amine
- ☒ d. 3° amine and ether
- ☐ e. None of these choices.

✓ Doğru

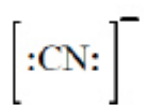
The correct answer is: 3° amine and ether

Question 6

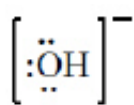
Incorrect

Mark 0.00 out of 10.00

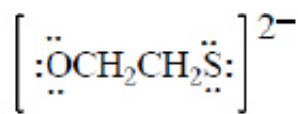
Ambident nucleophiles are ones which can react with a substrate at either of two nucleophilic sites. Which of the following is not an ambident nucleophile?



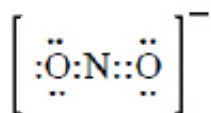
I



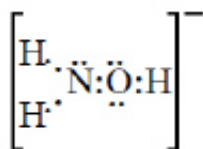
II



III



IV



V

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

✗ Yanlış

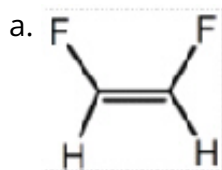
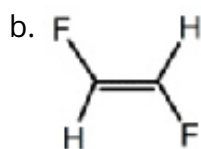
The correct answer is: II

Question 7

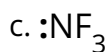
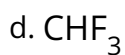
Correct

Mark 10.00 out of 10.00

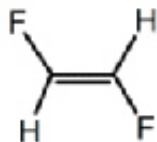
Which molecule would you expect to have no dipole moment (i.e., $\mu = 0$ D) ?

☐☒

Doğru

☐☐☐

The correct answer is:

**Question 8**

Correct

Mark 10.00 out of 10.00

What is the hybridization state of the boron atom in BF₃?

☒

Doğru

☐☐☐☐

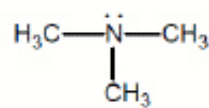
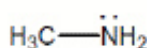
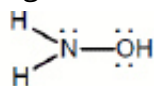
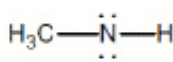
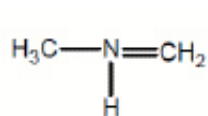
The correct answer is: *sp*²

Question 9

Incorrect

Mark 0.00 out of 10.00

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



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

✗ Yanlış

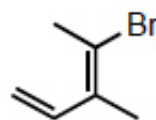
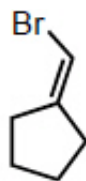
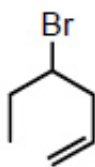
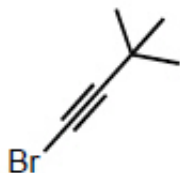
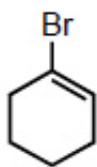
The correct answer is: I

Question 10

Incorrect

Mark 0.00 out of 10.00

Which compound is not a constitutional isomer of the others?



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

✗ Yanlış

The correct answer is: III