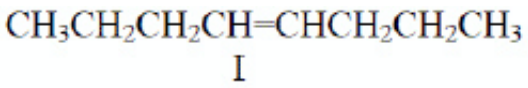
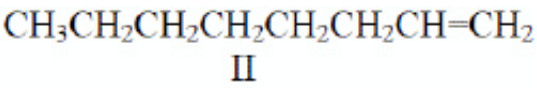
Question 1

Correct Mark 1.00 out of 1.00

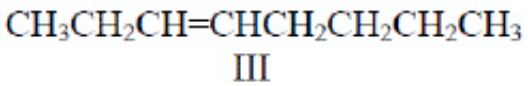
Consider the following:



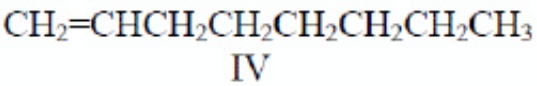
I



II



III



IV

Which structures can exist as cis-trans isomers?

Select one:

- a. I and IV
- b. I and III ✓ Doğru
- c. I and II
- d. I and alone
- e. II and III

The correct answer is: I and III

Question 2

Correct Mark 1.00 out of 1.00

For a molecule to possess a dipole moment, which following condition is necessary but not sufficient?

Select one:

- a. presence of one or more polar bonds ✓ Doğru
- b. presence of oxygen or fluorine
- c. a non-linear structure
- d. three or more atoms in the molecule
- e. absence of a carbon-carbon double or triple bond

The correct answer is: presence of one or more polar bonds

Question 3

Incorrect Mark 0.00 out of 1.00

In the molecular orbital model of benzene, how many pi-electrons are delocalized about the ring?

Select one:

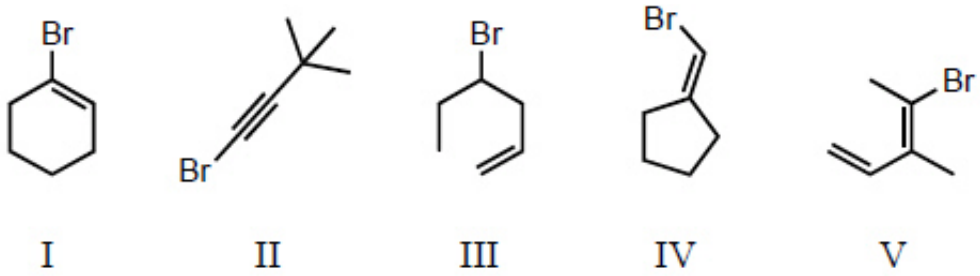
- a. 4
- b. 5
- c. 2
- d. 3 ✗ Yanlış
- e. 6

The correct answer is: 6

Question 4

Correct Mark 1.00 out of 1.00

Which compound is not a constitutional isomer of the others?



I II III IV V

Select one:

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

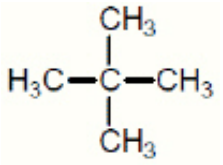
The correct answer is: III

Question 5 Correct Mark 1.00 out of 1.00

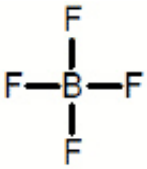
In which of these cases does the central atom have a zero formal charge?

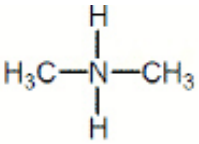
Select one:

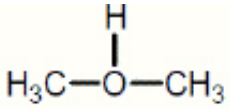
a. HFH

b. 

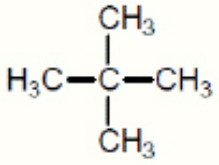
✓ Doğru

c. 

d. 

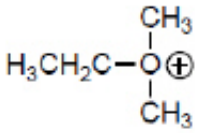
e. 

The correct answer is:

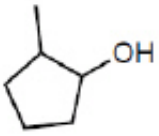


Question 6 Correct Mark 1.00 out of 1.00

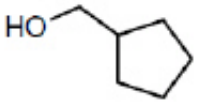
Which compound is a tertiary alcohol?



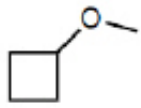
I



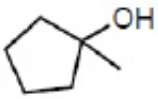
II



III



IV



V

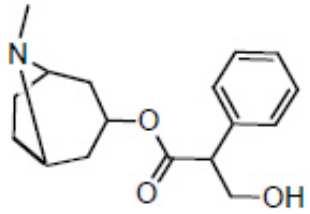
Select one:

- a. III
- b. V ✓ Doğru
- c. I
- d. II
- e. IV

The correct answer is: V

Question 7 Correct Mark 1.00 out of 1.00

Drawn below is *Atropine*, found in *Atropa belladonna*, sometimes used in dilating pupils during an eye-exam. Which of the following functional groups is NOT in atropine?



Atropine

Select one:

- a. amine
- b. alcohol
- c. ketone ✓ Doğru
- d. ester
- e. benzene ring

The correct answer is: ketone

Question 8 Incorrect Mark 0.00 out of 1.00

Which is the strongest acid?

Select one:

- a. $CH_3CH_2CH_2CHClCH_2CO_2H$
- b. $CH_3CH_2CH_2CHFCH_2CO_2H$
- c. $CH_3CH_2CH_2CHICH_2CO_2H$
- d. $CH_3CHBrCH_2CH_2CH_2CO_2H$ ✗ Yanlış
- e. $CH_3CH_2CH_2CH_2CHFCO_2H$

The correct answer is: $CH_3CH_2CH_2CH_2CHFCO_2H$

Question 9 Correct Mark 1.00 out of 1.00

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

Select one:

- a. CH_3CO_2H $pK_a = 4.75$
- b. $ClCH_2CO_2H$ $pK_a = 2.81$
- c. Cl_2CHCO_2H $pK_a = 1.29$
- d. CH_3CH_2OH $pK_a = 18$ ✓ Doğru
- e. Cl_3CCO_2H $pK_a = 0.66$

The correct answer is: CH_3CH_2OH $pK_a = 18$

Question 10 Not answered Marked out of 1.00

Which of the following reactions proceeds with inversion of configuration at the carbon
bearing the leaving group?

Select one:

- a. E2
- b. S_N1
- c. All of these answer choices are correct.
- d. E1
- e. S_N2

The correct answer is: S_N2