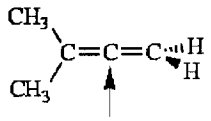
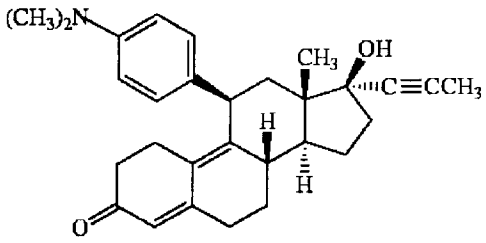
10) Choose the correct hybridization for the atom indicated in the molecule below.



A) sp B) sp^3 C) sp^2 D) none of the above

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

11) The synthetic steroid RU-486 is shown below. How many pi bonds does RU-486 contain?



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

12) Which of the molecules below can be properly called an amine?

A) $CH_3CH_2CH_2OH$

B) CH_3COOH

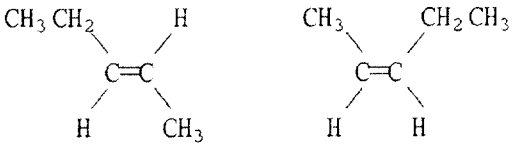
C) $CH_3CH_2CH_2NO_2$

D) $CH_3CH_2NHCH_3$

E) CH_3CN

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

13) Are the two compounds shown below best described as cis-trans isomers, constitutional isomers, or not isomeric?



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

14) Choose the term below which best describes the geometry of acetylene (HCCH).

A) square planar

B) trigonal bipyramidal

C) linear

D) trigonal

E) tetrahedral