HYDROCARBONS

TEST

Hydrocarbons, General 1

Date:

1. Which one is a member of the alkynes?
   A) C_2H_4 B) C_2H_6 C) C_3H_4 D) C_3H_6 E) C_3H_8

2. Which compound has a capability to undergo addition reaction of Hydrogen?
   A) butane B) ethane C) 1,2 – difluoroethylene
   D) CCl_4 E) isopropane

3. Which one belongs to the alkynes?
   A) C_2H_2 B) C_4H_8 C) C_2H_6 D) C_3H_4 E) C_4H_6

4. Which bond or bonds is/are present in the structure of ethylene?
   A) ionic bond B) metalic bond C) sigma
   D) Π bond E) sigma and pi bond

5. When 0.2 mole of an alkene is burnt; 8.96 liter of CO_2 is produced at STP condition. What is the formula of this alkene?
   A) C_2H_4 B) C_2H_2 C) C_2H_6 D) C_3H_6 E) C_3H_8

6. 130 liter of oxygen is needed to burn the 50 liter of CH_4 and C_2H_4 mixture. What is the volume of CH_4 in the mixture?
   A) 10 B) 15 C) 20 D) 30 E) 40

7. Which one has an ability to make addition reaction of hydrogen?
   A) C_2H_6 B) C_2H_5OH C) $C_2H_4Br_2$ D) C_2H_5Br E) C_2H_2

8. When 0.88 gram of an organic compound is burnt, 2.2 gram of CO_2 and 1.08 gram of H_2O are formed. What is the simplest formula of compound?
   A) $(C_5H_{12}O)_n$ B) $(C_5H_{12})_n$ C) $(CH_3)_n$
   D) $(C_4H_9O)_n$ E) $(C_2H_6O)_n$

9. While the 15 liters of mixture of C_2H_4 and C_2H_2 gases are saturated; 21 liter of H_2 gas is consumed. What is the volume of C_2H_4 in the mixture?
   A) 5 B) 6 C) 7 D) 8 E) 9

10. How many liter of oxygen is needed to burn the acetylene that is obtained from 6.4 gram of CaC_2? (Ca: 40, C: 12)
    A) 2.8 B) 4.48 C) 5.6 D) 11.2 E) 22.4

11. When 0.1 mole of hydrocarbon is burned in the atmospheric oxygen completely; 0.2 mole of CO_2 and 0.3 mole of H_2O are produced. What is the chemical formula of this hydrocarbon?
    A) C_2H_2 B) C_2H_4 C) C_2H_6 D) C_4H_6 E) C_4H_8

12. Which one consists of Pi (Π) bond?
    A) $C_3H_4Br_2$ B) C_3H_8 C) C_3H_7Br
    D) $C_3H_6Br_2$ E) C_3H_7OH

13. After burning of substance; combustion products are getting CO_2, SO_2, P_2O_5 and H_2O. Which element may not be present in the structure of this substance?
    A) C B) S C) O D) H E) P

14. For C_4H_6;
    I. it is an unsaturated hydrocarbon
    II. it contains two Π (pi) bonds
    III. it gives addition reaction with Br_2

    Which statement(s) is/are expected to be correct?
    A) I B) I - II C) I – III D) II – III E) I, II, III

15. Which one doesn't give addition reaction
    A) 2-butene
    B) 2-methyl-1,3-butadiene
    C) cyclohexane
    D) vinyl acetylene
    E) acetylene