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Worksheet: Carbon and its Compounds

1. A mixture of oxygen and ethyne is burnt for welding. Can you tell why a mixture of ethyne and air is not used?
2. What is hydrogenation? What is its industrial application?
3. How can ethanol and ethanoic acid be differentiated on the basis of their physical and chemical properties?
4. Ethane, with the molecular formula C2H6 has
5. Why are carbon and its compounds used as fuels for most applications?
6. Explain the formation of scum when hard water is treated with soap.
7. What are the two properties of carbon which lead to the huge number of carbon compounds we see around us?
8. Explain the nature of the covalent bond using the bond formation in CH■Cl.
9. Butanone is a four-carbon compound with the functional group
10. Explain the mechanism of the cleaning action of soaps.
11. While cooking, if the bottom of the vessel is getting blackened on the outside, it means that
12. Why does micelle formation take place when soap is added to water? Will a micelle be formed in other solvents such as ethanol also?
13. What change will you observe if you test soap with litmus paper (red and blue)?
14. People use a variety of methods to wash clothes. Usually after adding the soap, they ‘beat’ the clothes on a stone, or beat it with a paddle, scrub with a brush or the mixture is agitated in a washing machine. Why is agitation necessary to get clean clothes?
15. Which of the following hydrocarbons undergo addition reactions: C■H■, C■H■, C■H■, C■H■, and CH■?
16. How would you distinguish experimentally between an alcohol and a carboxylic acid?
17. Would you be able to check if water is hard by using a detergent?
18. What are oxidising agents?
19. What will be the formula and electron dot structure of cyclopentane?
20. Why is the conversion of ethanol to ethanoic acid an oxidation reaction?