Ethanol Notesheet C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why

**Directions**: Use the accompanying PowerPoint (*available online*) to complete this sheet. This sheet will be due upon the completion of the PowerPoint in class. These assignments are graded on a +/✓/- scale.

1. What is OPEC?
2. OPEC has 12 (including , ,

 , and ) and these countries control
3. OPEC is a cartel. What does this mean?
4. What did OPEC do in 1973 that significantly affected the United States?
5. Why did OPEC do this?
6. How did the embargo affect the United States?
7. What happened to the US in 1979?
8. How did the 1990 Clean Air Act amendments affect US energy policies?
9. How did the terrorist attacks of 9/11 affect US energy policies?
10. What was announced by President Bush in 2007?
11. Why Brazil?
12. What is ethanol?
13. How does the ethanol in the US differ from ethanol in Brazil?
14. How and why did Brazil develop its own ethanol production capabilities?
15. The US Congress sent delegations to Brazil to research and observe their

 that enabled Brazil to be

 that could be completely
16. EISA aimed to accomplish what five main objectives?
17. What is the Renewable Fuel Standard?
18. Ethanol is a made by
19. Biomass is
20. Usually a or a is the biomass used to make ethanol.
21. True or false: sugars and starches are the only kind of biomass that can be used to make ethanol.

Explain:
22. What is fermentation?
23. E10, E15, and E85 all refer to what?
24. What is a feedstock?
25. Briefly summarize the three main steps of producing ethanol:
26. True or False: the use of ethanol instead of petroleum is a relatively new idea. Explain:
27. True or false: ethanol has the same molecular structure regardless of what it is made from.
28. Draw the ethanol molecule
in the space to the right:
29. Why are emissions of CO, NOx, and unburned hydrocarbons lower in ethanol-fueled engines than in engines powered by gasoline?
30. How many O2 molecules are needed to combust one molecule of ethanol?

How many are needed to combust one molecule of octane?
31. What is the octane rating?
32. What is engine knocking?
33.

Unit Wrap-up C. Kohn, Agricultural Sciences - Waterford WI

This page is designed to help raise your grade while enabling you to develop skills you will need for after high
school. You will need to complete every question and blank in order to receive full credit for your notes. Note: if you cannot come up with a strategy to remember a difficult concept on your own, see your instructor for help.

1. What is a topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
2. What is a 2nd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
3. What is a 3rd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
4. Circle the most appropriate response. You will only be graded on whether or not you completed this section.

Circle one: *I used my notes outside of class to prepare for the quiz.* Definitely – Yes – Sort of - No

Circle one: *I took extra notes in the margins for very difficult concepts.* Definitely – Yes – Sort of - No

Circle one: *I created a personal strategy for at least three difficult items.* Definitely – Yes – Sort of - No

Circle one: *I was very involved and actively studying during the quiz review.* Definitely – Yes – Sort of - No

Circle one: *I think I will be satisfied with the quiz grade I received this week.* Definitely – Yes – Sort of - No

Circle one: *I might need to meet with the instructor outside of class.* Definitely – Yes – Sort of - No