IB Biology
Review of Structural Biochemistry

Name _____
Period _____ **Date** _____

Name the following expressions:

1. C _____
2. H_2O _____
3. $Na^+ Cl^-$ _____
4. $H^+ (OH)^-$ _____
5. $H^+ Cl^-$ _____
6. CO_2 _____
7. O_2 _____
8. O _____
9. Which of these indicates ionic bonds?

10. Which of these indicates covalent bonds?

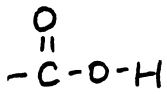
11. Which two expressions are the same compound?

12. Which of these does not exist as expressed?

13. Which of these when added to water will change the pH? How will the pH be affected? Why?

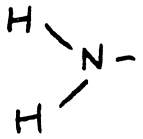
Molecular components: 1. Name each 2. Which building block contains it?

14.



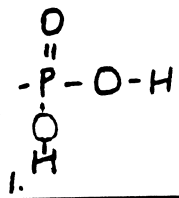
1. _____
2. _____

15.



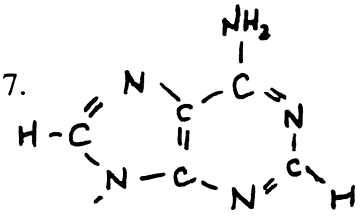
1. _____
2. _____

16.



1. _____
2. _____

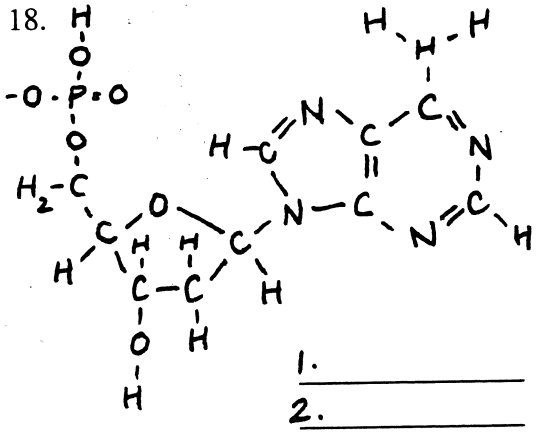
17.



1. _____
2. _____

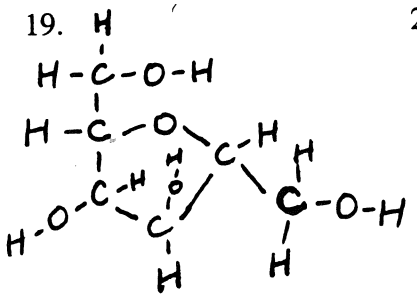
Building Blocks: 1. Name each 2. Of which class of molecules is each a building block?

18.



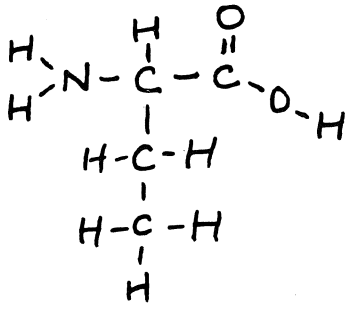
1. _____
2. _____

19.

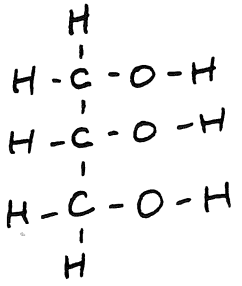


1. _____
2. _____

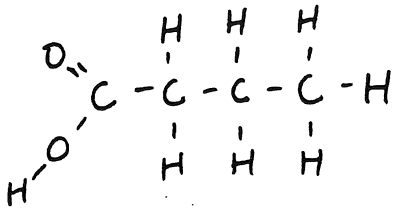
20.



1. _____
2. _____

21. 

1. _____
2. _____

22. 

1. _____
2. _____

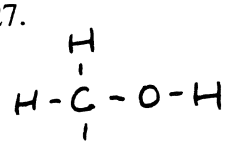
Match the expressions.

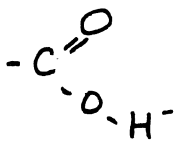
23. -COOH

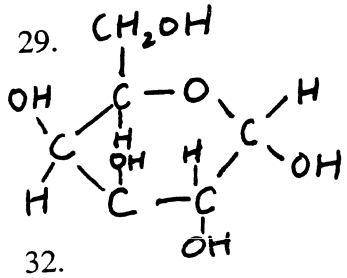
24. $-NH_2$

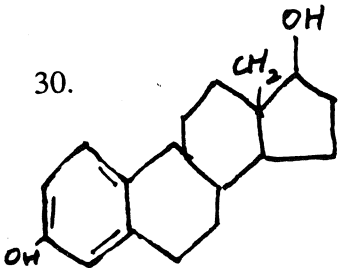
25. H_2N-

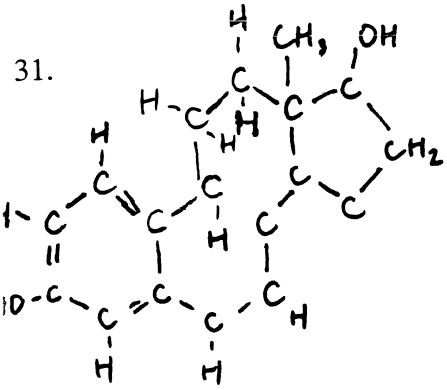
26. $-CH_2OH$

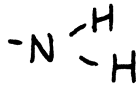
27. 

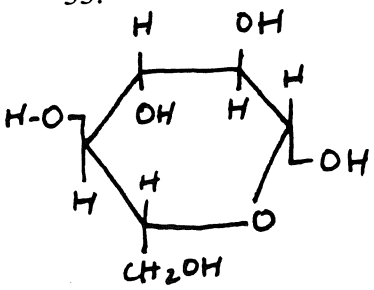
28. 

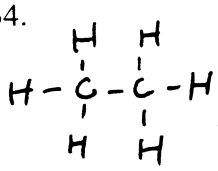
29. 

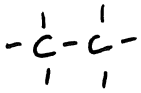
30. 

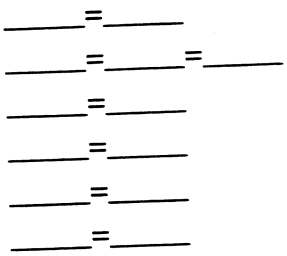
31. 

32. 

33. 

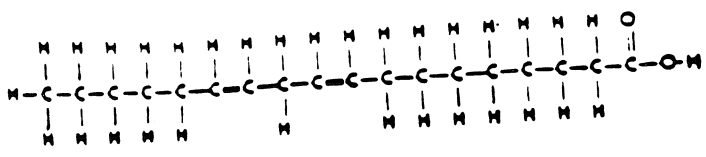
34. 

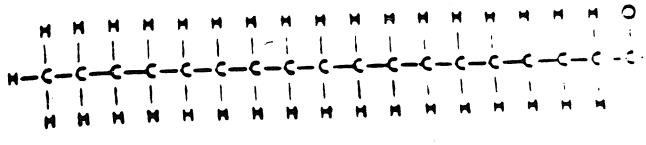
35. 



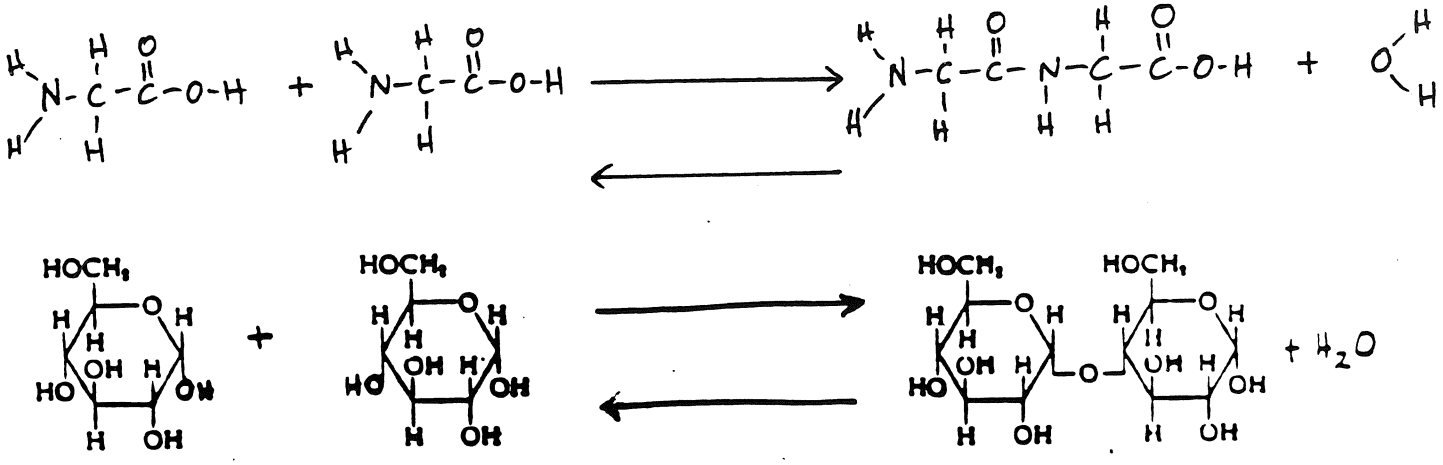
Miscellaneous Questions

36. Which of these fatty acids is unsaturated? How do you know? Why is this significant?





37. Do the following: 1. On each arrow indicate one of the following reactions: condensation synthesis or hydrolysis. 2. Highlight the atoms "removed". 3. Put an * on the peptide bond. 4. Put a @ on the glycosidic linkage.



What is required, but not shown, that is needed to speed up each of these reactions?

Enzymes

38. What are enzymes? Give a structural and functional definition.

39. Why are they important?

40. What factors influence their effectiveness?

41. What does it mean that enzymes are specific?

42. How are enzymes related to heredity?