1. Given the structural formula:

The compound represented by this formula can be classified as an

- A) organic acid B) ether
- C) ester D) aldehyde
- 2. Which structural formula represents an ether?

$$\begin{array}{cccccc} A) & H & O & B) & H & O \\ & I & I & I & I \\ & H - C - C - H & & I & I \\ & I & I & I \\ & H & & H \\ C) & H & H & D) & H & H \\ & H - C - C - OH & H - C - O - C - H \\ & I & I & I \\ & H & H & H \end{array}$$

3. Which formula represents an ether?

A) 
$$O = B$$
  $O = CH_3 - C - OH_3 - CH_3 - OH$ 

4. Which structural formula represents an ether?



5. Which structural formula represents diethyl ether?



6. What is the general formula for an ether?

7. What is the general formula for an ether?

A) 
$$R_1 - O - R_2$$
  
C) O  
 $R - C - H$ 
B)  $R - OH$   
D) O  
 $R - C - OH$ 

8. Which is the structural formula for diethyl ether?



9. The compound CH<sub>3</sub>COOCH<sub>3</sub> is classified as

A) an acid	B) an ester
C) a hydrocarbon	D) an alcohol

10. Which compound is an ester?

A) CH <sub>3</sub> COOH	B) CH <sub>3</sub> CHO
C) CH <sub>3</sub> COOCH <sub>3</sub>	D) CH <sub>3</sub> COCH <sub>3</sub>

11. Which formula correctly represents an ester?

A) CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> OH	B) CH <sub>3</sub> COCH <sub>3</sub>
C) CH <sub>3</sub> COOCH <sub>3</sub>	D) CH <sub>3</sub> CH <sub>2</sub> COOH

12. Which compound is an ester?

A) CH <sub>3</sub> OH	В) СН3СООН
C) CH <sub>3</sub> OCH <sub>3</sub>	D) CH <sub>3</sub> COOCH <sub>3</sub>

13.	3. The compound CH <sub>3</sub> CH <sub>2</sub> COOCH <sub>3</sub> is an example of		20. Which material is a synthetic polymer?		
	<ul><li>A) an ester</li><li>C) an acid</li></ul>	<ul><li>B) an alcohol</li><li>D) a polymer</li></ul>		<ul><li>A) starch</li><li>C) cellulose</li></ul>	<ul><li>B) nylon</li><li>D) protein</li></ul>
14.	Which class of organic compounds has molecules that contain nitrogen atoms?		21. Molecules of propene combine in a chemical reaction to produce a large single molecule. This		
	<ul><li>A) alcohol</li><li>C) ether</li></ul>	<ul><li>B) amine</li><li>D) ketone</li></ul>		A) substitution	<ul><li>B) fermentation</li><li>D) esterification</li></ul>
15.	Given the formula:		22	Which materials are no	b) esternication
H H H O           /H H-C-C-C-C-N          H H H H This compound is classified a		H H sified as	<ul> <li>A) nylon and cellulose</li> <li>B) nylon and polyethylene</li> <li>C) starch and cellulose</li> </ul>		
	A) an aldehyde	B) an amide	•••	D) starch and polyethy	
	C) an amine D) a ketone		23.	The synthetic fiber nyl process of	on is produced through the
16.	6. Given the structural formula: H O H H - C - C - N H - H H - H	rmula:		<ul><li>A) esterification</li><li>C) polymerization</li></ul>	<ul><li>B) saponification</li><li>D) substitution</li></ul>
17		24. Which set contains one natural polymer and one synthetic polymer?			
	This compound is classified as anA) amideB) amineC) aldehydeD) alcoholCiven the structural formula:			<ul><li>A) cellulose and starch</li><li>B) polyethylene and nylon</li><li>C) protein and starch</li><li>D) protein and nylon</li></ul>	
H H O I I O		25. Which substance is made up of monomers joined together in long chains?			
-				<ul><li>A) ketone</li><li>C) ester</li></ul>	<ul><li>B) protein</li><li>D) acid</li></ul>
	H H This structural formula represents a molecule of		26.	When C <sub>2</sub> H <sub>4</sub> molecules polymer formed is	s polymerize, the name of the
	<ul><li>A) an aldehyde</li><li>C) a ketone</li></ul>	<ul><li>B) an ester</li><li>D) an amino acid</li></ul>		<ul><li>A) polymethylene</li><li>C) polypropylene</li></ul>	<ul><li>B) polyethylene</li><li>D) polybutylene</li></ul>
18.	Which class of organic nitrogen?	compounds contains	27.	. In which type of reaction are long-chain molecules formed from smaller molecules?	
	<ul><li>A) aldehyde</li><li>C) amine</li></ul>	<ul><li>B) alcohol</li><li>D) ether</li></ul>		<ul><li>A) substitution</li><li>C) fermentation</li></ul>	<ul><li>B) oxidation</li><li>D) polymerization</li></ul>
19.	<ul> <li>Cellulose, protein, and starch are classified as</li> <li>A) aldehydes</li> <li>B) esters</li> <li>C) synthetic polymers</li> <li>D) natural polymers</li> </ul>		28.	The chaining together large molecule occurs	of small molecules to form a during the process of
				<ul><li>A) substitution</li><li>C) polymerization</li></ul>	<ul><li>B) fermentation</li><li>D) esterification</li></ul>

29. Which is a natural	polymer?	30. Which polymers occur naturally?
A) celluloseB) nylonC) polyesterD) polyethylene		<ul><li>A) starch and nylon</li><li>B) starch and cellulose</li><li>C) protein and nylon</li><li>D) protein and plastic</li></ul>