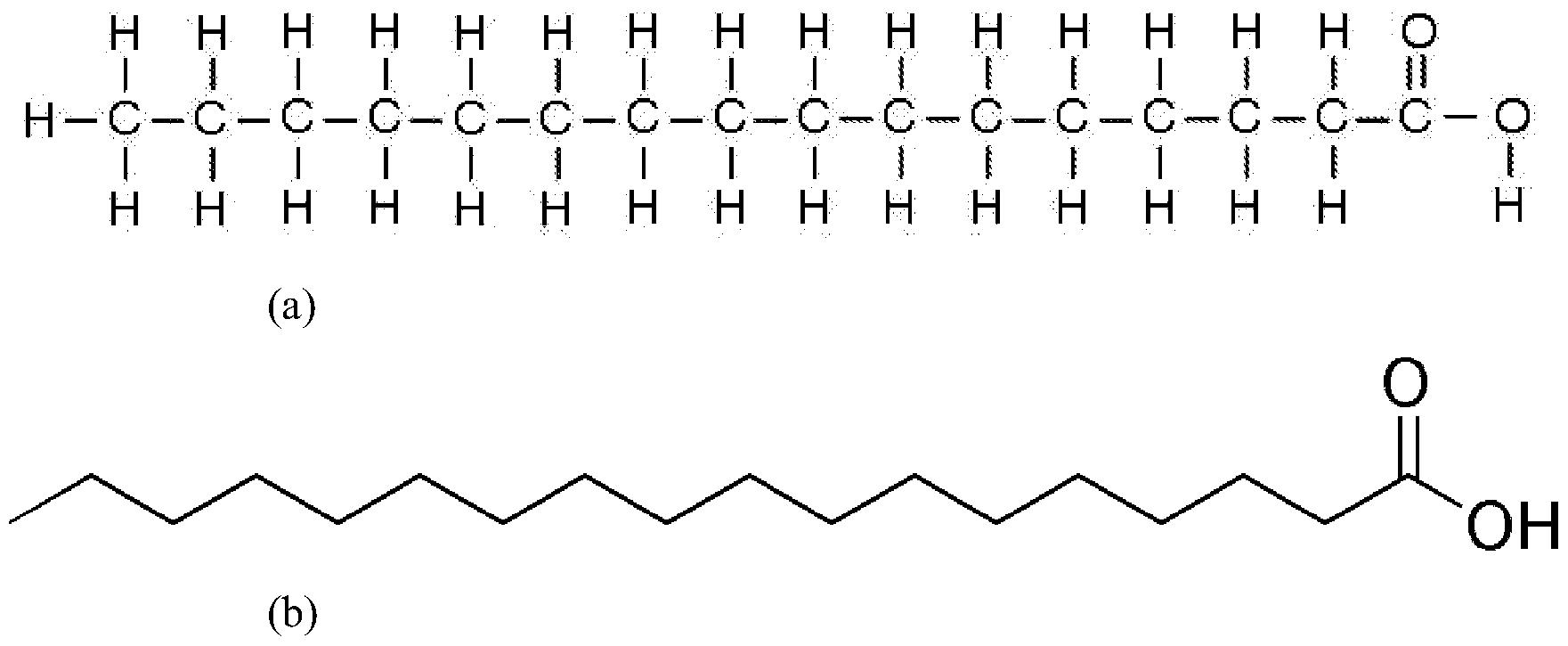
**Lipids Practice Quiz**

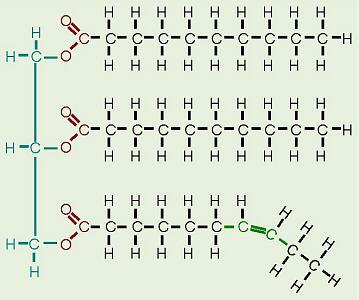
1. **Which of the following is NOT a typical function of a LIPID?**
2. **Form energy rich storage molecules**
3. **Store genetic information for heredity**
4. **Insulate the body and pad organs**
5. **Form cell membranes**
6. **Act as hormones in the body**
7. **The lipid shown below is best described as:**

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwijldjl1_TRAhUJ7WMKHThZBkAQjRwIBw&url=http://dpsc.tk/phospholipid-structure-in-cell-membrane/&psig=AFQjCNFoxXlYARWfg6G2b0hJo11hb_cG3g&ust=1486237334798888)

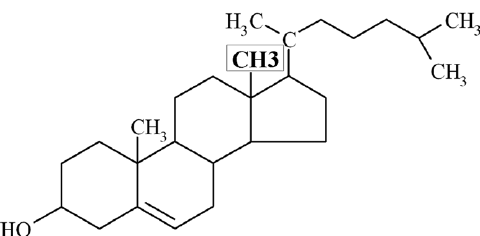
1. **Neutral fat with saturated fatty acids**
2. **Neutral fat with unsaturated fatty acids**
3. **Sterol lipid used to firm up cell membranes**
4. **Phospholipid used to build cell membranes**
5. **The molecule shown below is best described as..**

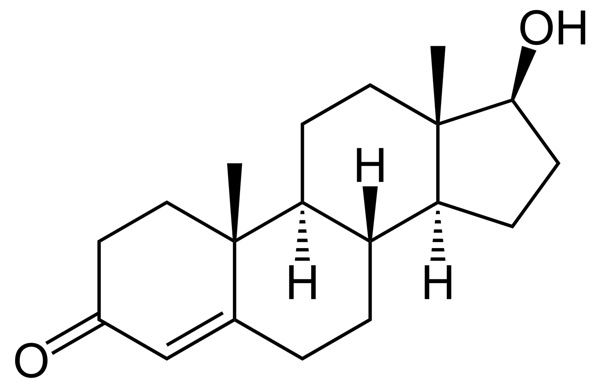
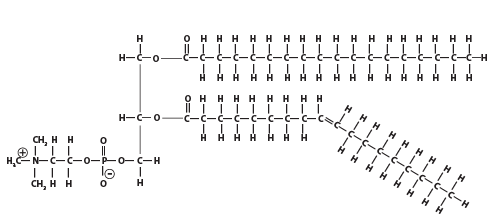
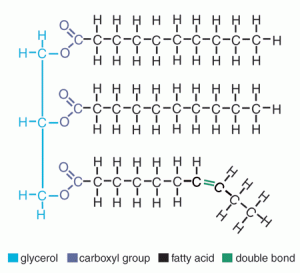
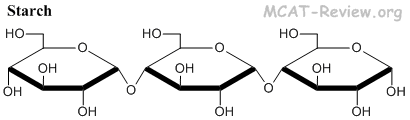
[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwibseCt_PTRAhUTzGMKHdMvCWgQjRwIBw&url=http://www.google.com/patents/EP2496546A1?cl%3Den&psig=AFQjCNE7k1XQxRAnGmUDcOWVQBiOx5rrTg&ust=1486247162290541)

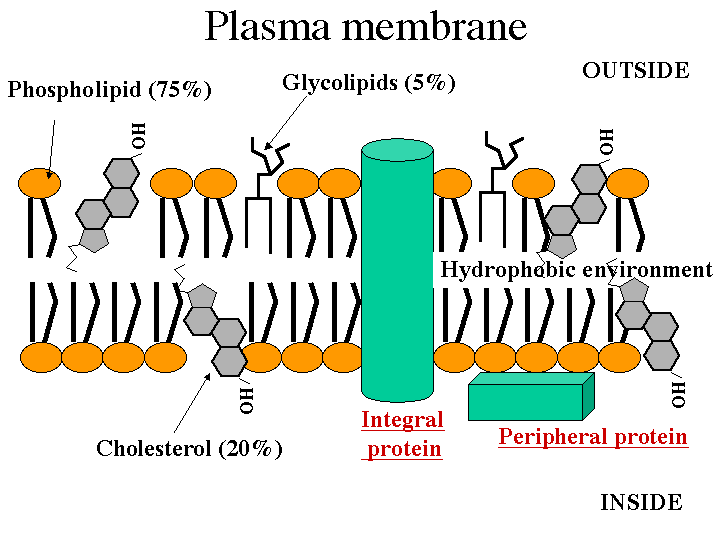
1. **A glycerol molecule**
2. **A sterol lipid**
3. **A saturated fatty acid**
4. **An unsaturated fatty acid**
5. **During the formation (synthesis) of the molecule below, what statement is accurate?**

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwil1MjEgPXRAhUK42MKHa9kB-IQjRwIBw&url=http://media.lanecc.edu/users/powellt/Courses/225Lectures/05A/L5Apowell.html&psig=AFQjCNFhsCPNMU-rVDmSrkPto5zNzMeI0w&ust=1486248219158152)

1. **Three waters were produced**
2. **Three waters were consumed**
3. **Four waters were produced**
4. **Four waters were consumed**
5. **The molecule below is classified as…**

[](https://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwisx5KcgvXRAhUJxmMKHbesBnQQjRwIBw&url=https://www.researchgate.net/figure/273153129_fig3_Figure-3-Diagram-of-the-structure-of-a-cholesterol-molecule-with-the-methyl-group&bvm=bv.146094739,d.cGc&psig=AFQjCNGKBJ4BvQvrER2_PXBFj7XNeYKb5g&ust=1486248526779866)

1. **Neutral Fat**
2. **Phospholipid**
3. **Monoglyceride**
4. **Sterol Lipid**
5. **What function may it serve in living things?**
6. **Helps store energy**
7. **Helps store genetic information**
8. **Helps firm up (proper texture) cell membranes**
9. **Is burned as a fuel to release energy**
10. **Which of the following would likely be a Fatty Acid?**
11. **H2O**
12. **C18H34O2**
13. **C12H22011**
14. **C5H10O5**
15. **A cell's membrane would mostly consist of which of the following?**
16. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjXrLz2g_XRAhUMzmMKHQdtDVgQjRwIBw&url=http://www.precisionnutrition.com/all-about-testosterone&bvm=bv.146094739,d.cGc&psig=AFQjCNGRIsOjzrmnl0lZqE3mQ0Br093dQg&ust=1486249205541777)
17. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjHwImXhPXRAhUI42MKHf4BC20QjRwIBw&url=http://www.sciencemusicvideos.com/membranes-1-the-phospholipid-bilayer/&bvm=bv.146094739,d.cGc&psig=AFQjCNGzvQJXRcf9PPBb0GJNdLzvId8YDg&ust=1486249267442773)
18. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiI7K-ChvXRAhUW62MKHfWNC_4QjRwIBw&url=http://steventeagarden.com/part-2-cholesterol-isnt-cholesterolcholesterol-lipoproteins-triglycerides-fats-diet-atherosclerosis-stress-inflammation-metabolic-syndrome-leptin-resistance-means-yo/&bvm=bv.146094739,d.cGc&psig=AFQjCNE6Mn4qlXsYoVBFYZ0DPFSC_BqZDg&ust=1486249730137087)
19. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwi0o5a2hvXRAhUKxmMKHRcnC_QQjRwIBw&url=http://mcat-review.org/carbohydrates.php&bvm=bv.146094739,d.cGc&psig=AFQjCNHF6kCJDdQFm3LoeKGJGs47gEEQDw&ust=1486249868840375)
20. **Name the molecule that the arrow is pointing to**



1. **PHOSPHOLIPID C) GLYCOGEN**
2. **GLYCEROL D) ESTROGEN**
3. **CHOLESTEROL**

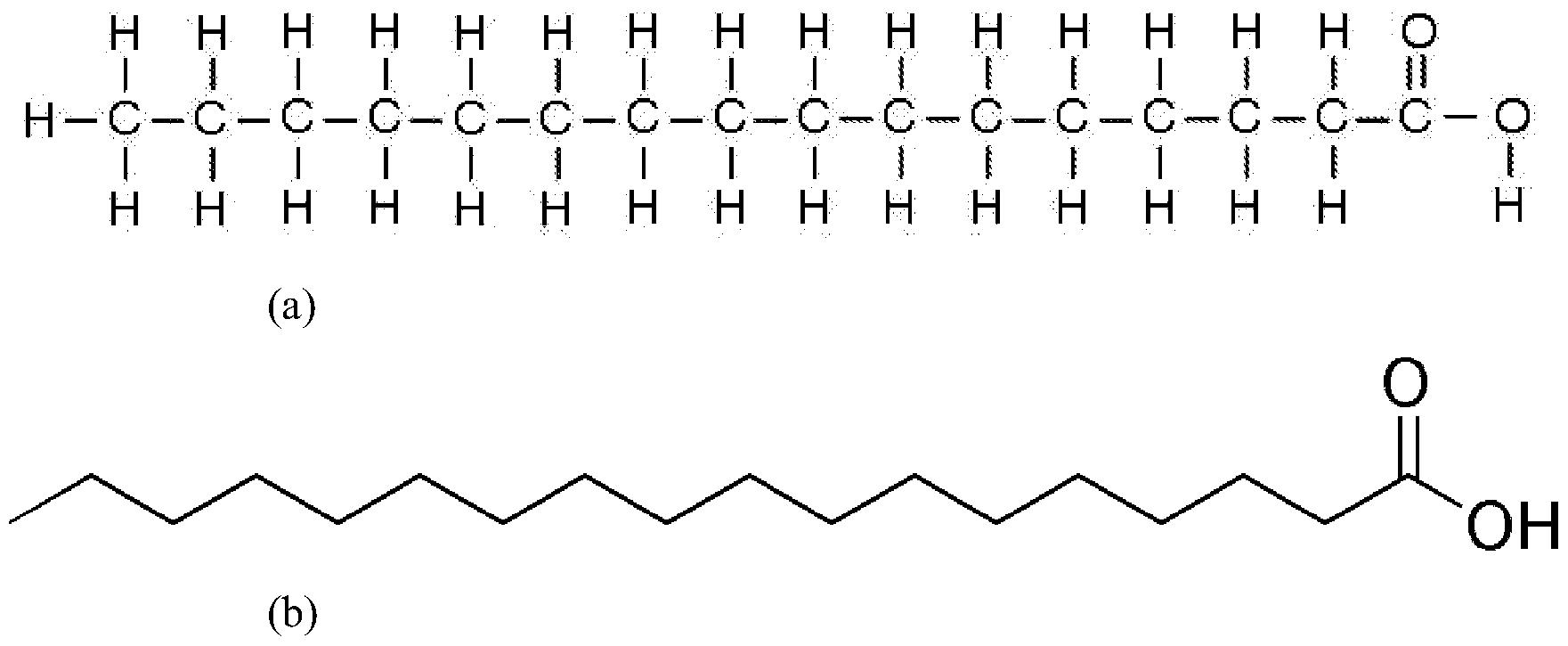
**10. Which of the following was NOT mentioned when talking about this Organic Group known as FATS/Lipids?  
A) Amino Acids  
B) Carboxylic Acid Group  
C) Glycerol  
D) Monoglyceride  
E) Phosphate Group**

**ANSWER KEY:**

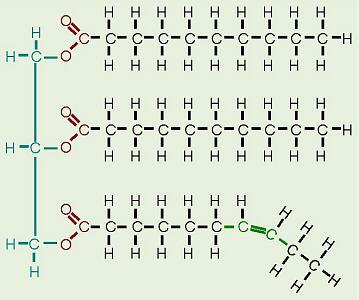
1. **Which of the following is NOT a typical function of a LIPID?**
2. **Form energy rich storage molecules (neutral fats)**
3. **Store genetic information for heredity (sounds like DNA to me)**
4. **Insulate the body and pad organs (fat/adipose tissue)**
5. **Form cell membranes (phospholipids)**
6. **Act as hormones in the body (sterol lipids)**
7. **The lipid shown below is best described as:**

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwijldjl1_TRAhUJ7WMKHThZBkAQjRwIBw&url=http://dpsc.tk/phospholipid-structure-in-cell-membrane/&psig=AFQjCNFoxXlYARWfg6G2b0hJo11hb_cG3g&ust=1486237334798888)

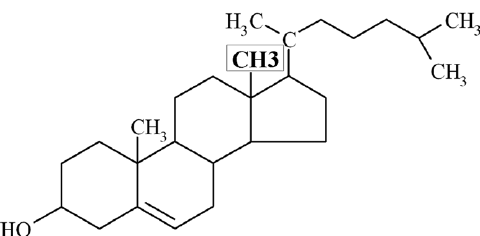
1. **Neutral fat with saturated fatty acids**
2. **Neutral fat with unsaturated fatty acids**
3. **Sterol lipid used to firm up cell membranes (cholesterol)**
4. **Phospholipid used to build cell membranes (the glycerol has two hydrophobic FA's and the final spot on the glycerol is occupied by a hydrophilic phosphate head)**
5. **The molecule shown below is best described as..**

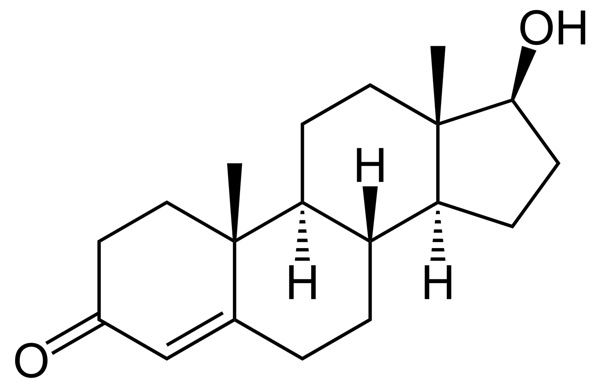
[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwibseCt_PTRAhUTzGMKHdMvCWgQjRwIBw&url=http://www.google.com/patents/EP2496546A1?cl%3Den&psig=AFQjCNE7k1XQxRAnGmUDcOWVQBiOx5rrTg&ust=1486247162290541)

1. **A Glycerol molecule (only has 3 carbons)**
2. **A sterol lipid (would look like honeycomb)**
3. **A saturated fatty acid (every carbon is holding as much H as possible and there is an acid group at one end)**
4. **An unsaturated fatty acid (would have a double bond in the carbon chain)**
5. **During the formation (synthesis) of the molecule below, what statement is accurate?**

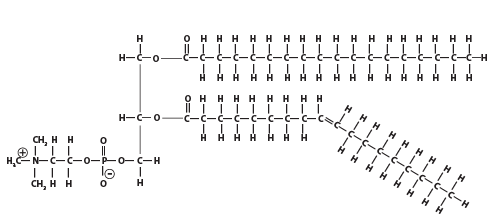
[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwil1MjEgPXRAhUK42MKHa9kB-IQjRwIBw&url=http://media.lanecc.edu/users/powellt/Courses/225Lectures/05A/L5Apowell.html&psig=AFQjCNFhsCPNMU-rVDmSrkPto5zNzMeI0w&ust=1486248219158152)

1. **Three waters were produced (as each FA is added to the 3 spots on the glycerol a water is produced)**
2. **Three waters were consumed (that would be hydrolysis to break apart)**
3. **Four waters were produced (only 3 spots of synthesis)**
4. **Four waters were consumed (Hydrolysis)**
5. **The molecule below is classified as…**

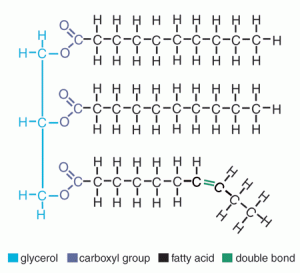
[](https://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwisx5KcgvXRAhUJxmMKHbesBnQQjRwIBw&url=https://www.researchgate.net/figure/273153129_fig3_Figure-3-Diagram-of-the-structure-of-a-cholesterol-molecule-with-the-methyl-group&bvm=bv.146094739,d.cGc&psig=AFQjCNGKBJ4BvQvrER2_PXBFj7XNeYKb5g&ust=1486248526779866)

1. **Neutral Fat (would have glycerol with 3 FAs)**
2. **Phospholipid (would have glycerol with 2 FAs and a phosphate head)**
3. **Monoglyceride (need a glycerol with 1 FA)**
4. **Sterol Lipid (has that honeycomb pattern)**
5. **What function may it serve in living things?**
6. **Helps store energy (neutral fats do)**
7. **Helps store genetic information (DNA does that)**
8. **Helps firm up cell membranes (sounds like cholesterol)**
9. **Is burned as a fuel to release energy (fatty acid or carb, but not sterol lipid)**
10. **Which of the following would likely be a Fatty Acid?**
11. **H2O (inorganic water)**
12. **C18H34O2 (organic hydrocarbon with acid group at end)**
13. **C12H22011 (organic but has a Carbohydrate ratio – disaccharide)**
14. **C5H10O5 (organic but has a Carbohydrate ratio – monosaccharide – 5 carbon pentose)**
15. **A cell's membrane would mostly consist of which of the following?**
16. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjXrLz2g_XRAhUMzmMKHQdtDVgQjRwIBw&url=http://www.precisionnutrition.com/all-about-testosterone&bvm=bv.146094739,d.cGc&psig=AFQjCNGRIsOjzrmnl0lZqE3mQ0Br093dQg&ust=1486249205541777)

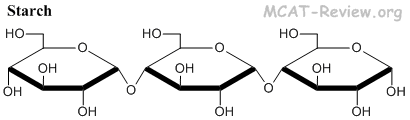
**Sterol lipid with honeycomb shape**

1. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjHwImXhPXRAhUI42MKHf4BC20QjRwIBw&url=http://www.sciencemusicvideos.com/membranes-1-the-phospholipid-bilayer/&bvm=bv.146094739,d.cGc&psig=AFQjCNGzvQJXRcf9PPBb0GJNdLzvId8YDg&ust=1486249267442773)

**Glycerol with two FA's and a phosphate head = Phospholipid**

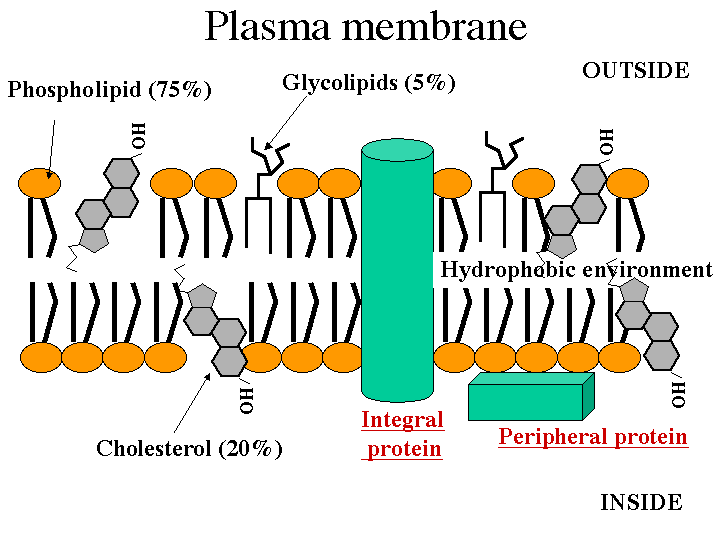
1. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiI7K-ChvXRAhUW62MKHfWNC_4QjRwIBw&url=http://steventeagarden.com/part-2-cholesterol-isnt-cholesterolcholesterol-lipoproteins-triglycerides-fats-diet-atherosclerosis-stress-inflammation-metabolic-syndrome-leptin-resistance-means-yo/&bvm=bv.146094739,d.cGc&psig=AFQjCNE6Mn4qlXsYoVBFYZ0DPFSC_BqZDg&ust=1486249730137087)

**Glycerol with 3 FA's = Neutral Fat – specifically a Triglyceride**

1. [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwi0o5a2hvXRAhUKxmMKHRcnC_QQjRwIBw&url=http://mcat-review.org/carbohydrates.php&bvm=bv.146094739,d.cGc&psig=AFQjCNHF6kCJDdQFm3LoeKGJGs47gEEQDw&ust=1486249868840375)

**Each unit is a Glucose, which is a carbohydrate, many glucoses linked together = a polysaccharide. If this had more and did not have many branches it would be STARCH**

1. **Name the molecule that the arrow is pointing to**



1. **PHOSPHOLIPID C) GLYCOGEN**
2. **GLYCEROL D) ESTROGEN**
3. **CHOLESTEROL**

**10. Which of the following was NOT mentioned when talking about this Organic Group known as FATS/Lipids?  
A) Amino Acids – these are the monomers of a PROTEIN  
B) Carboxylic Acid Group – Found at the end of a fatty acid  
C) Glycerol – One of the basic monomers in Neutral fats   
D) Monoglyceride – A glycerol with one Fatty Acid attached  
E) Phosphate Group – The polar group found on a Phospholipid**