AP BIOLOGY
CELL UNIT
ACTIVITY #4

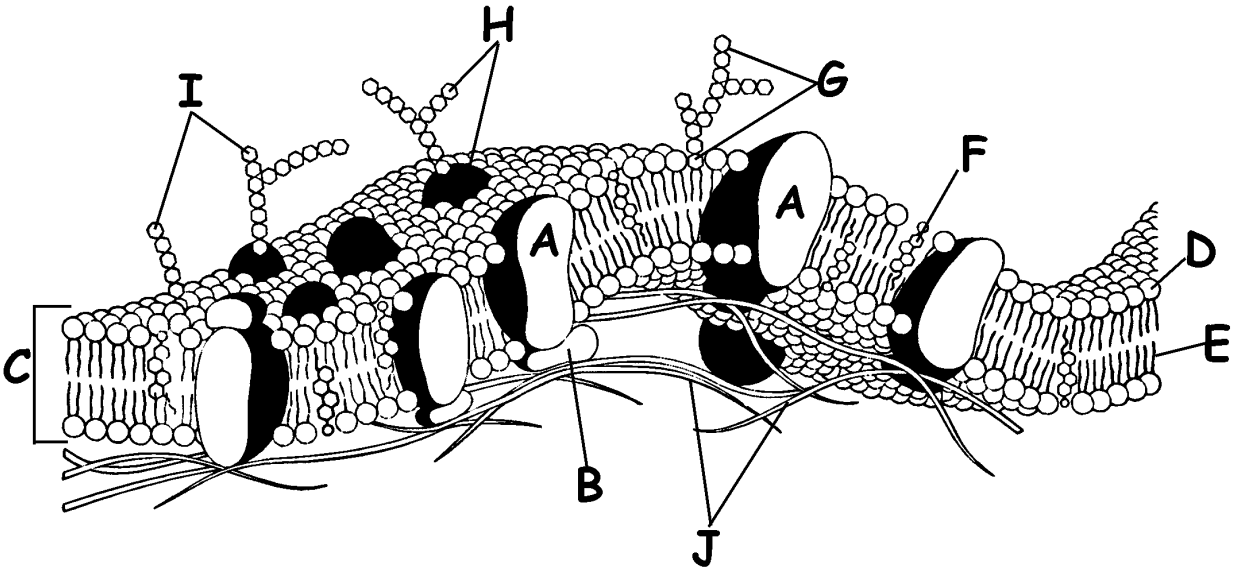
NAME_____

DATE_____HOUR_____

CELL MEMBRANE

QUESTIONS

1. Match the structure with the correct letter from the diagram.



_____ cholesterol

_____ cytoskeleton

_____ Glycolipid

_____ Glycoprotein

_____ hydrophilic end of phospholipid

_____ hydrophobic end of phospholipid

_____ integral protein

_____ lipid bilayer

_____ oligosaccharides

_____ peripheral protein

2. What component(s) of the cell membrane contribute to the fluid quality of the cell membrane?

_____

_____

3. Describe the experiment and the results that provided evidence that proteins drift through the membrane.

_____

_____

_____

4. Complete the following chart describing the role of cholesterol in the cell membrane.

Temperature	Role of Cholesterol	Effect on Membrane Fluidity
Warm		
Cold		

5. How is winter wheat able to survive the cold temperatures of winter without serious cell damage?

_____

_____

6. What component(s) of the cell membrane contribute to the mosaic quality of the cell membrane?

_____

7. How are integral proteins different from peripheral proteins?

Integral Proteins	Peripheral Proteins

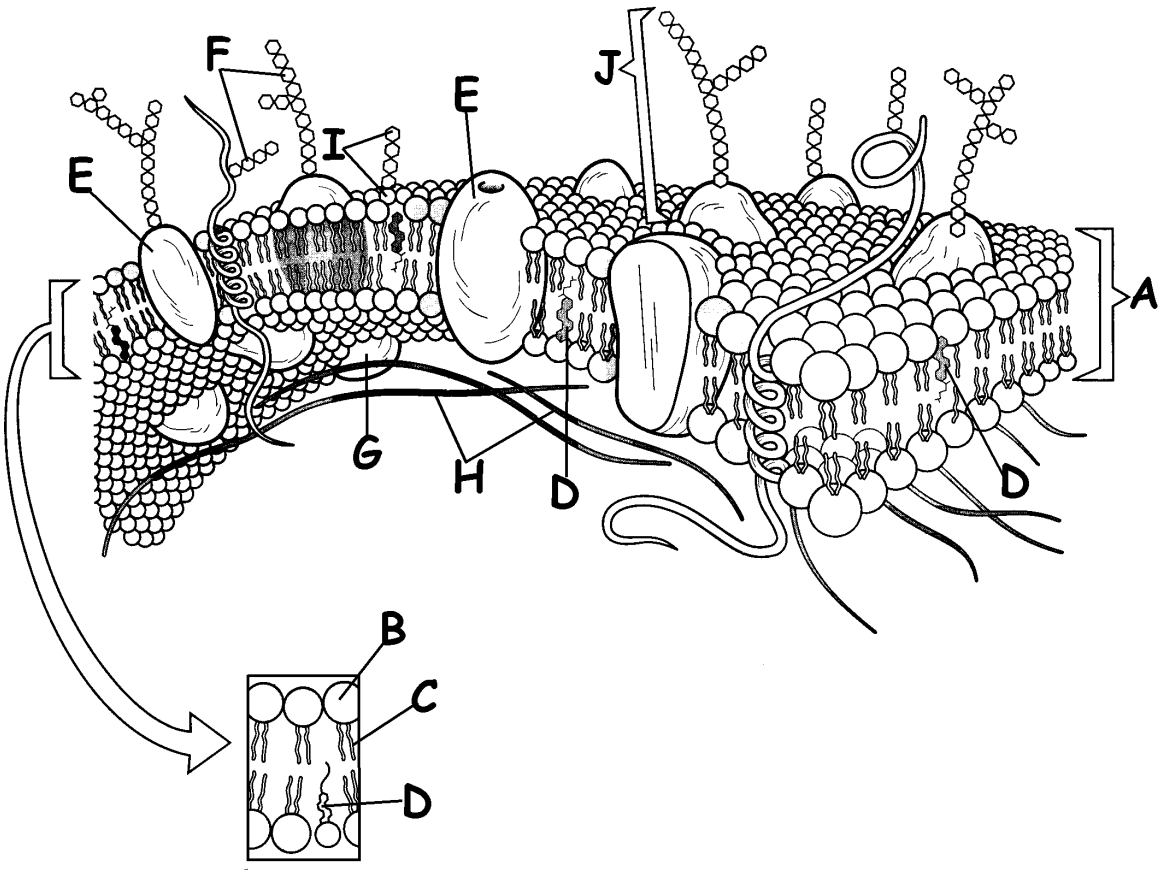
8. List possible functions of membrane proteins. (Give at least 3 possible functions.)

_____

_____

_____

9. Match the structure with the correct letter from the diagram.



_____ Cholesterol

_____ Cytoskeleton

_____ Glycolipid

_____ Glycoprotein

_____ Hydrophilic end of phospholipid

_____ Hydrophobic end phospholipid

_____ Integral protein

_____ Lipid bilayer

_____ Oligosaccharides

_____ Peripheral protein

10. Explain what is meant the by phrase “membranes are bifacial”.

_____

_____

11. What is the role of carbohydrates on the surface of cell membranes?

_____

12. How is cell-to-cell recognition important?

_____

_____

_____

13. What is an oligosaccharides?

_____

_____

14. Define each of the following terms.

Term	Definition
Glycoprotein	
Glycolipid	