

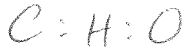
1. Name three types of carbohydrates and where you might find them. (6)

| Type | Found In |
|-----------|--|
| Cellulose | Plant cell walls |
| Glycogen | Storage form of glucose in livers of animals |
| Chitin | Cell wall of Fungi |

2. List three functions of carbohydrates:
 Starch Storage form of glucose in plants

- Short term energy supply
- Quick energy storage
- Structural Support
- Cell Membrane Markers

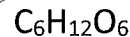
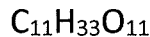
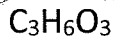
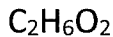
3. What three elements make up a carbohydrate?



4. What ratio do these three elements exist in carbohydrates?



5. Given the following chemical formulas, circle the one(s) that are carbohydrates:



6. Most common monosaccharide is glucose.

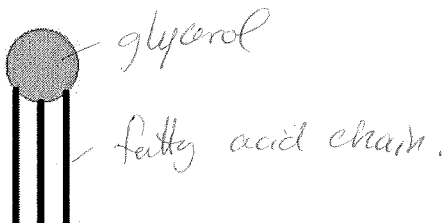
7. What are the three main types of lipids (3)?

Fats (triglycerides), Phospholipids, Steroids

8. Name three ways we use fats (3).

Long term energy storage
 insulation, padding, chemical messengers

9. Label the two main parts of this fat molecule (2):

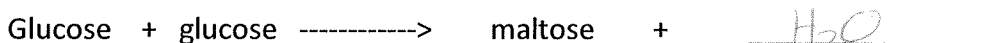




10. Circle which one(s) are unsaturated fatty acid(s) on the right:

11. A fat consists of one glycerol and three fatty acids.

12. Complete the equation below (1pt) :



13. What is the name of the process for the reaction above? dehydration synthesis

14. The name of the enzyme that would break down maltose: maltase

15. A disaccharide undergoing hydrolysis would produce 2 monosaccharides & H₂O

16. Cholesterol is made in liver and is an important part of

cell membrane / steroids

17. Name another source we get our cholesterol from (1) animal fats: meat, butter, eggs

18. Name two other important uses of cholesterol. (2) steroids & cell membrane

19. How is cholesterol transported through the blood? (1) lipoproteins

20. Another name for "good" cholesterol HDL

21. Why is it considered good cholesterol? carries LDL to liver to be broken down

22. Statins are drugs that lower LDL

23. Complete the chart below regarding blood glucose regulation (8):

| Hormone | Secreted by | Target | Result |
|----------|-------------|--------|---|
| Insulin | Panc | Cells | Cells take up circulating blood glucose |
| Glucagon | Panc | Liver | Release glycogen storage → glucose into blood |

24. Define Hypoglycemia and two ways it can be caused (3).

Blood Glucose lower than normal
dizziness, profuse irritability

Diabetes
Skipping meal
Drinking too much into food

25. Define Hyperglycemia and two ways it can be caused (3).

Blood Gluc higher than normal

Body doesn't make enough insulin or can't use insulin it produces:

→ diabetes, heart disease, stroke
Kidney disease, blindness

↳ cells can't use glucose → builds up → damage to small vessels