

MINISTRY OF EDUCATION

SECONDARY ENGAGEMENT PROGRAMME

GRADE 11

CHEMISTRY

WEEK 12

LESSON 2

1. Plants make glucose in the process of ____.

Answer:

2. Most saccharides eventually provide fuel for cellular respiration.

- a. TRUE
- b. FALSE

3. Living things use carbohydrates mainly for ____.

Answer:

4. Select all possible answers:

Choose the functional groups are on fructose?

- a. Ketone
- b. Aldehyde
- c. Hydroxyl
- d. Methanol

5. Cellulose is a polymer of starch.

- a. TRUE
- b. FALSE

6. Starches are simple carbohydrates.

- a. TRUE
- b. FALSE

7. Which form of glucose is favored in aqueous solution?

Answer:

8. Glucose is a monosaccharide.
- TRUE
 - FALSE
9. Glucose is the major energy source in most life forms.
- TRUE
 - FALSE
10. Monosaccharides are also frequently referred to by the common name ____.
- amino acids
 - enzymes
 - simple sugars
 - fats
11. Select all possible answers:
Examples of carbohydrates include ____.
- lipids
 - cellulose
 - glucose
 - sugars
12. Pentoses are the basic components of what important biomolecules?
- cell membranes
 - proteins
 - DNA and RNA
 - lipids
13. Glucose is ____.
- Ketohexose
 - Aldohexose
 - Ketopentose
 - Aldopentose
14. The brain utilizes about ____ % of the body's available biomolecule ____ as fuel.
- 35; galactose
 - 50; sucrose
 - 25; glucose
 - 10; fructose

15. Select all possible answers:

Choose the functional groups are on glucose?

- a. Ketone
- b. Hydroxyl
- c. Methanol
- d. Aldehyde

16. Carbohydrates are monomers of what types of organic molecules?

- a. alcohols and acids
- b. aldehydes and ketones
- c. acids and esters
- d. amines and aldehydes

17. How are glucose and fructose related?

- a. They are optical isomers.
- b. Fructose is two glucose molecules linked together.
- c. Fructose has one more hydroxyl group than glucose.
- d. They are structural isomers.

18. Fill in the blank(s):

Cellulose is a _____ carbohydrate that is a polymer of glucose.

19. Carbohydrates consist of atoms of

- a. carbon.
- b. hydrogen.
- c. oxygen.
- d. all of the above

20. Both glucose and fructose are known as reducing sugars.

- a. TRUE
- b. FALSE

21. Simple carbohydrates are called ____.

Answer:

22. Plants stores extra glucose as starches.

- a. TRUE
- b. FALSE

23. Starches are polymers of ____.

Answer:

24. Endurance athletes frequently consume large amounts food containing lots of ____ in order to improve their performance.

- a. vitamins
- b. carbohydrates
- c. lipids
- d. proteins

25. What is the empirical formula of most carbohydrates?

- a. C_2H_4O
- b. CHO
- c. CH_2O
- d. C_3H_6O

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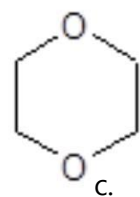
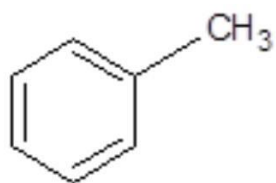
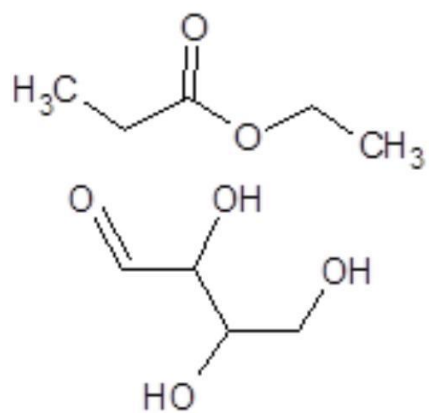
26. Which of the following is NOT a monosaccharide?

- a. ribose
- b. glucose
- c. sucrose
- d. fructose

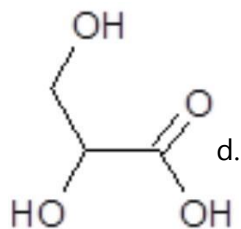
27. In what form are monosaccharides usually found when in aqueous solution?

- a. dissociated into ions
- b. as a 5 or 6-membered ring
- c. polymerized
- d. as an open chain

28. Which of the following is an example of a carbohydrate?



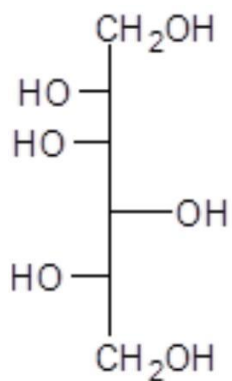
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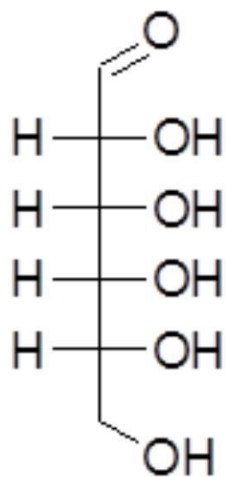
d.

e.

29. True or False:
The molecular structure of following is a carbohydrate.



- a. True
b. False



30. What is the compound above?

- a. Ester
- b. Gluconic acid
- c. Amino acid
- d. Carboxylic acid
- e. Carbohydrate

31. Carbohydrates which cannot be further hydrolyzed are called ____.

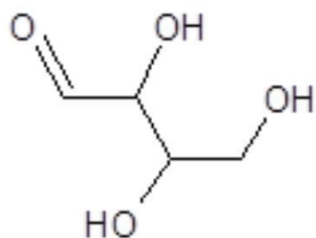
- a. Disaccharides
- b. Tetrasaccharides
- c. Monosaccharides
- d. Trisaccharides

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1. photosynthesis
2. TRUE
3. energy
4. Ketone, Hydroxyl
5. FALSE
6. FALSE
7. Cyclic
8. TRUE
9. TRUE
10. simple sugars
11. cellulose, glucose, sugars
12. DNA and RNA
13. Aldohexose
14. 25; glucose
15. Hydroxyl , Aldehyde
16. aldehydes and ketones
17. They are structural isomers.
18. complex
19. all of the above
20. TRUE
21. sugars
22. TRUE
23. glucose
24. carbohydrates
25. CH_2O
26. sucrose
27. as a 5 or 6-membered ring
- 28.



29. False
30. Carbohydrate
31. Monosaccharides