

L.S.F.

BIO200  
BASIC BIOLOGY

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Always Ready To

Help!!

1. A fat molecule consists of
  - a. Glycerol and amino acid
  - b. Fatty acid and glycerol
  - c. Fatty acid and amino acid
  - d. Glycerol and carbohydrate
  
2. Plant cell differ from animal cell in having
  - a. Mitochondria
  - b. Rough endoplasmic reticulum
  - c. Cell wall
  - d. Golgi apparatus
  
3. Phospholipids are important cell membrane constituents because they
  - a. Contain glycerol
  - b. Can form bilayers
  - c. Contain both polar and non-polar portions
  - d. Combine covalently with proteins
  
4. 30% of nucleotide bases of DNA are adenine (A), what is the percentage of guanine (G)
  - a. 20%
  - b. 40%
  - c. 30%
  - d. 70%
  
5. A student conducted an experiment where carbon dioxide was bubbled through water and recorded the pH meter readings every 5 second:

Time	pH meter reading
5	7.5
10	7.2
15	7.0
20	6.8

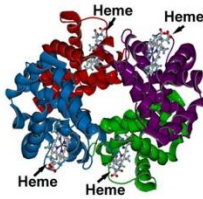
What would be the most valid conclusion the student could draw from these results?

- a. The change in pH was too small to be significant
  - b. The water became less acidic
  - c. The water became more acidic
  - d. The change in pH might not be related to the gas being bubbled through the water
- 
6. A scientist proposed the following hypothesis:” *Eating greasy food causes pimples* “. the dependent variable is:
    - a. Eating
    - b. Greasy food

- c. Development of pimples
  - d. All of the above
7. The scientist tested his hypothesis and found out that people that are eating greasy food gets pimples compared to those not eating greasy food. The conclusion is:
- a. The hypothesis is accepted
  - b. The hypothesis is rejected
  - c. The hypothesis is supported
  - d. None of the above
8. What are the components of DNA
- a. Sugars, bases, proteins
  - b. Sugars, phosphates, bases
  - c. Phosphate, bases, polypeptides
  - d. Phosphate, proteins, polypeptides
9. The production of alcohol by yeast is called
- a. Fermentation
  - b. Brewing
  - c. Respiration
  - d. None of the above
10. In RNA, thymine (T) is replaced by:
- a. Adenine (A)
  - b. Guanine (G)
  - c. Uracil (U)
  - d. Cytosine (C)
11. Enzymes are
- a. Proteins
  - b. Carbohydrates
  - c. RNA
  - d. Fats
12. The general formula of carbohydrates is:
- a.  $(\text{CH}_2\text{O})_n$
  - b.  $(\text{C}_4\text{H}_2\text{O})_n$
  - c.  $(\text{C}_6\text{H}_2\text{O})_n$
  - d.  $(\text{CH}_2\text{O})_n\text{COOH}$

13. Fat is hydrolyzed by the enzyme known as
- Trypsin
  - Lipase
  - Pepsin
  - Fatase
14. The oxygen molecule formed during photosynthesis comes from
- Water
  - Organic acids
  - CO<sub>2</sub>
  - Atmosphere
15. Which one of the following statements regarding enzyme inhibition is correct
- Competitive inhibition is seen when a substrate competes with an enzyme for binding to an inhibitor protein
  - Non competitive inhibition of an enzyme can be overcome by adding large amount of substrate
  - Non competitive efficiency inhibitors often bind to the enzyme irreversibly
  - Competitive inhibition is seen when a substrate and the inhibitor compete for the active site on the enzyme
16. Ribosomes are composed of
- DNA and RNA
  - RNA and proteins
  - DNA and proteins
  - RNA only
17. Amino acids are joined by
- Peptide bond
  - Hydrogen bond
  - Ionic bond
  - Glycosidic bond
18. Which factor is responsible for the inhibition of the enzymatic process during feedback?
- Enzyme
  - End product
  - Substrate
  - Temperature

19. Haemoglobin has



- a. Primary structure
  - b. Secondary structure
  - c. Tertiary structure
  - d. Quaternary structure
20. Which of the following are products of the light reactions of photosynthesis that are utilized in the Calvin cycle?
- a.  $\text{CO}_2$  and glucose
  - b.  $\text{H}_2\text{O}$  and  $\text{O}_2$
  - c. ATP and NADPH
  - d. Electrons and  $\text{H}^+$
21. A major function of Golgi apparatus is
- a. Fermentation
  - b. Light-independent photosynthesis
  - c. Protein modification
  - d. Isolation of electron transport systems
22. Krebs's cycle operates in
- a. Cytoplasm
  - b. Mitochondrial matrix
  - c. Mitochondrial cristae
  - d. Outside the cell
23. Which of the following is not surrounded by a double membrane
- a. Nucleus
  - b. Mitochondria
  - c. Chloroplast
  - d. The cell
24. If a red blood cell is placed into a beaker filled with distilled water, what will happen?
- a. The RBC will swell and may explode because it is placed into a hypotonic environment.
  - b. The RBC will swell and may explode because it is placed into a hypertonic environment.

- c. The RBC will shrivel up because it is placed into a hypotonic environment.
  - d. Nothing will happen.
25. How does facilitated diffusion happen?
- a. Hydrophilic substances diffuse through the membrane by means of transport proteins
  - b. Hydrophobic substances diffuse through the membrane by means of transport proteins
  - c. Through pinocytosis, the cell absorbs various solutes from the environment
  - d. ATP is used to allow molecules into the cell
26. The symbol H stands for \_\_\_\_\_ of hydrogen
- a. One atom
  - b. One molecule
  - c. Two atoms
  - d. One ion
27. How do you calculate the number of neutrons in an atom?
- a. The atomic mass plus the number of protons
  - b. The atomic mass subtracted the number of protons
  - c. The atomic mass plus the number of electrons
  - d. The atomic mass subtracted the number of electrons
28. During respiration, the substrate is
- a. Reduced
  - b. Hydrogenated
  - c. Carbonated
  - d. Oxidized
29. How is a molecular/covalent compound formed?
- a. When elements are combined
  - b. When elements gain electrons
  - c. When atoms share electrons to complete the outer energy level
  - d. When two oppositely charged ions attract
30. The primary structure of a protein represents
- a. Linear sequence of amino acids
  - b. 2-D structure
  - c. Helical structure
  - d. Subunit structure

31. The process common to aerobic and anaerobic respiration is
- Oxidation
  - Glycolysis
  - Kreb's cycle
  - Electron transport chain
32. Photosynthetic pigments found in the chloroplasts occur in
- Thylakoid membranes
  - Plastoglobules
  - Matrix
  - Chloroplasts envelope
33. Which organelles are responsible for movement of cells
- Ribosomes
  - Cytoskeleton
  - Cilia
  - Centrioles
34. During glycolysis, 6-carbon glucose is broken into
- nothing, but is recycled as a catalyst
  - 1 molecule of 6-carbon fructose
  - 2 molecules of 3-carbon pyruvic acid or pyruvate
  - NADH
35. Hydrogen bonds are
- Chemical bonds
  - When two atoms share electrons
  - When one atom gives an electron to another atom
  - None of the above
36. Which of the following is not part of the scientific process?
- Making predictions
  - Asking questions
  - using creative insight
  - proving theories are true
37. In the formation of a macromolecule, what type of reaction would join two subunits together?
- Hydrophobic reaction
  - Hydrolysis reaction
  - Dehydration reaction
  - Denaturation reaction

38. The two strands of a DNA double helix are held together by

- a. Ionic bonds
- b. Hydrogen bonds
- c. Polar covalent bonds
- d. Hydrophobic bonds

39. Ribosomes are found

- a. Only in the nucleus
- b. In the cytoplasm
- c. Attached to the smooth endoplasmic reticulum
- d. Both b and c

40. Which of the following statements concerning scientific hypotheses is false?

- a. Their consequences can be tested by different investigators
- b. They can be used to make predictions
- c. They are not always correct.
- d. They are the same as theories.