AP Biology Chapter 8 Vocabulary

Name _____ date _____

I. Multiple Choice

1. ____ This type of plant will open their stomata only at night, incorporating CO_2 into organic acids (ex. malic acid). Stomata are closed during the day and CO_2 is released from organic acids to be used in the Calvin cycle.
    a. C3
    b. C4
    c. CAM
    d. CCR
2. ____ The step in photosynthesis where CO_2 is incorporated into RuBP creating G3P.
    a. Carbon fixation
    b. Reduction
    c. Regeneration of RuBP
    d. Photorespiration
3. ____ When NADP+ is reduced, it forms…
    a. FADH2
    b. NADPH
    c. NADH2
    d. RuBP
4. ____ Organisms that live on compounds produced by other organisms are known as…
    a. Autotrophs
    b. Heterotrophs
    c. Producers
    d. Phytoplankton
5. ____ The membrane system located within the stroma where chlorophyll is found…
    a. Thylakoids
    b. Mitochondria
    c. Chloroplasts
    d. Smooth Endoplasmic Reticulum
6. ____ The carbohydrate produced directly from the Calvin cycle is…
    a. Glucose
    b. RuBP
    c. AcetylCoA
    d. G3P
7. ____ The wavelengths of the electromagnetic magnetic spectrum that can be absorbed by plant pigments…
    a. Infra red
    b. Visible light
    c. Ultra violet
    d. Gamma rays

8. ____ This problem occurs in C3 plants on hot, dry days when the plants must close their stomata to conserve water. The result is a useless compound derived from the addition of O_2 to the Calvin cycle.
    a. Photosynthesis
    b. Oxidation
    c. Cell respiration
    d. Photorespiration
9. ____ This type of plant fixes CO_2 into a 4-carbon compound that can be used when the plant must close their stomata during the day, which prevents CO_2 from entering the leaf.
    a. CAM
    b. C4
    c. C3
    d. REM
10. ____ The part of photosynthesis where CO_2 is fixed into carbohydrates…
    a. Calvin cycle
    b. Citric acid cycle
    c. Kreb's cycle
    d. Glycolysis
11. ____ Hydrocarbons found in plant cells that absorb violet and blue-green but reflect yellow and orange.
    a. Chloroplasts
    b. Chlorophyll
    c. Carotenoids
    d. Xanthophyll
12. ____ The 5-carbon molecule that is attached to CO_2 in the first step of the Calvin cycle. This molecule is also reproduced at the end of the cycle.
    a. Rubisco
    b. RuBP
    c. G3P
    d. Glucose
13. ____ The key light-capturing pigment that participates directly in the light reactions…
    a. Chlorophyll a
    b. Chlorophyll b
    c. Chlorophyll d
    d. Carotenoid
14. ____ $CO_2 + H_2O + \text{Energy} \longrightarrow C_6H_{12}O_6 + O_2$ is the general chemical equation for…
    a. Cell respiration
    b. Kreb's cycle
    c. Photophosphorylation
    d. Photosynthesis

15. ____ Chloroplasts are mainly found in the cells of this type of tissue.
    a. Cuticle
    b. Epidermal
    c. Vascular
    d. Mesophyll
16. ____ The site of the Calvin cycle…
    a. Stroma
    b. Stomata
    c. Matrix
    d. Thylakoid
17. ____ The accessory pigment of chlorophyll a that absorbs blue, orange and red…
    a. Chlorophyll c
    b. Chlorophyll b
    c. Chlorophyll d
    d. Carotenoid
18. ____ The enzyme that catalyzes the reaction that fixes CO_2 in the first step of the Calvin cycle…
    a. Rubisco
    b. RuBP
    c. G3P
    d. Carbonic anhydrase
19. ____ This structure found in the thylakoid membrane consists of a reaction-center surrounded by several light-harvesting complexes...
    a. G3P
    b. Photosystem
    c. Photorespiration
    d. ATP synthase
20. ____ This type of plant produces a 3-carbon compound called 3-phosphoglycerate as the first organic product of carbon fixation.
    a. C3
    b. C4
    c. CAM
    d. ELO
21. ____The discrete ‘particles’ of light energy are called…
    a. Protons
    b. Plasma
    c. Electrons
    d. Photons

22. ____ The light reactions generate ATP by using chemiosmosis to power the conversion of ADP to ATP in a process called…
    a. Photophosphorylation
    b. Hydrogenation
    c. Photorespiration
    d. Carbon fixation
23. ____ Structures in the leaf of a plant where transpiration and respiration occur…
    a. Stroma
    b. Petiole
    c. Stomata
    d. Tubers
24. ____ Part of photosynthesis where H_2O is oxidized to O_2…
    a. Glycolysis
    b. Light reactions
    c. Dark reactions
    d. Calvin cycle
25. ____ Organisms that can make their own food…
    a. Heterotroph
    b. Herbivore
    c. Omnivore
    d. autotroph