

**PART I: Choose the letter of the best answer.**

1. Which of the following pigments serves more of a protective rather than contributing to the photosynthetic capabilities of plants?

- a. Anthocyanins
- b. Carotenoids
- c. Chlorop
- d. Chlorop

2. The the phot photosystems are used to collect radi sun. Two most prominent photosystems

- a. Photosy both absorb light at 700 nm.
- b. Photosy both absorb light at 680 nm.
- c. Photosystem I that absorbs radiant energy at 700 nm and Photosystem II that absorbs at 680 nm.
- d. Photosystem II that absorbs radiant energy at 700 nm and Photosystem I that absorbs at 680 nm.

3. Which among the following statements about photosynthetic organisms is CORRECT?

- I. All plants are capable of photosynthesis.
- II. All organisms t ble of photosynthesis .

III. Plants are not \_\_\_\_\_s that are  
capable of phot  
IV. Plants that coul \_\_\_\_\_ from insects such  
as Venus fly trap are not photosynthetic.

- a. I and II
- b. I and III
- c. I and IV
- d. II and III

4. Which process and part of a chloroplast are correctly paired?

- a. Light-dependent reactions: stroma; Light-independent reactions: grana
- b. Light-dependent reactions: stroma; Light-independent reactions: thylakoid
- c. Light-dependent reactions: thylakoid; Light-independent reactions: stroma
- d. Light-dependent reactions: chloroplast; Light-independent reactions: stroma

5. In light-dependent reactions, the first electron carrier that accommodates electrons released from hydrolysis of water?

- a. Pheophytin

- b. Plastocyanin
- c. Plastoquinone
- d. Photosystem I

6. Chemiosmosis is not only observed in the mitochondrion, but also in chloroplasts. Which part of the chloroplast declines in pH as photosynthesis occurs?

- a. Stroma
- b. Thylakoid
- c. Chlorophyll
- d. Intergranal space

7. Which among the following groups of plants are correctly grouped into given category?

- I. C<sub>3</sub>: rice, soybean and wheat
- II. C<sub>3</sub>: rice and corn
- III. C<sub>4</sub>: corn and sugarcane
- IV. C<sub>4</sub>: Soybean, wheat and sugarcane

- a. I and II
- b. I and III
- c. I and IV
- d. II and III

8. Succulent plants which undergo carbon dioxide fixation during

- b. Aloe vera
- c. Jade plant
- d. Soybean

9. How many molecules of ATP are consumed in complete Calvin cycle?

- a. 2
- b. 3
- c. 4
- d. 6

10. Which of the following processes is responsible for inefficient ATP yield of C<sub>3</sub> plants during hot and arid

- b. Carbon fixation
- c. Photorespiration
- d. Light-dependent reactions

**PART II: Briefly answer the following questions.**

1. Do plants produce carbon dioxide just like humans and other animals? Justify
2. Search for some chemicals that cause defoliation of plants. Cite the effects of such chemicals.
3. How does the existence of mitochondria supports the claims of endosymbiotic theory? Briefly discuss your answer in three sentences.

### **PART III: Performance-based Assessment**

The class will be divided into four groups. Each group will

agricultural industry of the Philippines.