Multiple Choice Questions

1 Select the correct answer.

i. Removal of the source of carbon dioxide from photosynthesizing chloroplast results in rapid changes in the concentration of certain chemicals. Which one of the following represents the correct combination of concentration changes?

	ATP	Bibulose bishposphate	Phosphoglyceric acid (PGA)
A.	decreases	decreases	increases
B.	decreases	increases	no change
C.	increases	increases	decreases
D	increases	decreases	increases

ii. What are the products of the light reactions in photosynthesis?

A. ATP and NADP
B. ATP, NADPH2 oxygen
C. ATP, PGA and NADH2
D. ATP, PGA and oxygen

iii. During the light dependant stage of photosynthesis, the photoactivated pigment removes an electron from the hydroxylation derived from the water molecule. The fate of the free hydroxly radical is that it:

A. is broken doen into oxygen and a free radical of hydrogen
B. is used to raise the activation level of chlorophyll by donating positive charge.
C. is used to produce adenosine triphosphate from adenosnine diphosphate
D. reduces carbon dioxide to sugar

iv. Carbon dioxide labeled with $_{14}C$ has been used to identify the intermediate compounds in the Calvin cycle, the light-independent stage in photosyntheis. Which compound would be the first to contain the $_{14}C$?

A. glucose
B. PGA
C. RuBP
D. starch

v. The rate of photosynthesis of a freshwater plant is measured using five spectral colors. Which sequence of colours would give an increasing photosynthesis response?

Smallest					Largest response
A.	Blue	Green	Yellow	Orange	Red
B.	Green	Yellow	orange	Red	Blue
C.	Red	Orange	Yellow	Green	Blue
D.	Yellow	Green	orange	Blue	Red

vi. During dark reactions the three carbon atoms of 3-PGA are derived from:

A. RuBP only
B. CO_2 only
C. RuBP + CO_2
D. RuBP+ CO_2+ PEP

vii. Chlorophyll is soluble in :

C. water and organic solvent D. not in any solvent

viii. photorespiration takes place only in:

A. root B. mitochondria
C. green parts of the plant D. all cells of the plant

ix. In C_4 plants, fixation of CO_2 occurs in:

A. palisade tissue
B. Cortex of stem
C. spongy mesophyll and bundle of sheath
D. phloem tissue

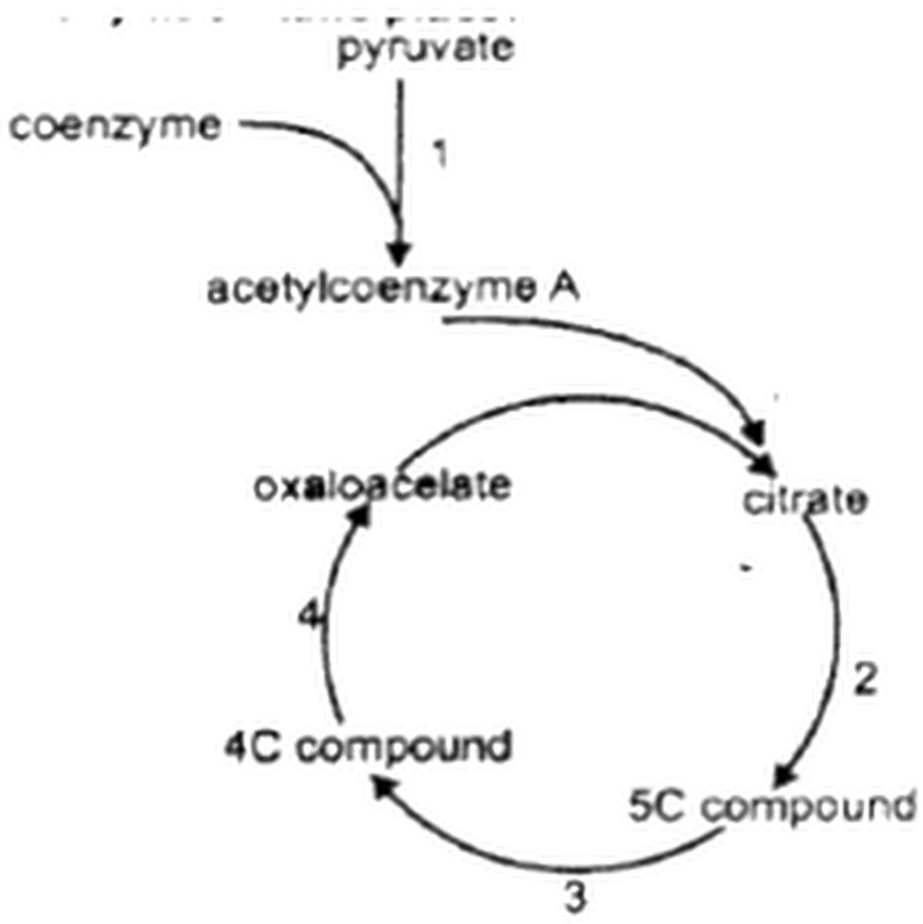
x. ATP synthesis during light reactions is :

A. oxidative B. photosynthesis
C. substrate phosphorylation D. photophosphoryation

xi. In C_3 plants first stable product of photosynthesis during dark reaction is:

A. PGA B. PGAL
C. RuBP D. Oxaloacetate

xii. The diagram shows the krebs cycle. At wich numbered stages does decarboxylation take place?



A. 1 and 2 B. 1,2 and 3
C. 1,3 and 4 D. 1,2,3 and 4

Answers

i. C	ii. B	iii. A	iv.B	v. B	vi. C
vii. C	viii. C	ix.C	x. D	xi. B	xii. B