

NEET PHOTOSYNTHESIS IN HIGHER PLANTS — LIGHT REACTION: PHOTOSYSTEMS AND ELECTRON TRANSPORT (Z-SCHEME) — PYQS

Max. Marks: 52

Questions: 13

Section A (MCQ) — 13 questions

Q.1 Find the incorrect statement(s) about photosynthesis from the following :

- A. The water splitting complex is associated with PSI.
- B. C_4 plants use the C_3 pathway of CO_2 fixation as the main biosynthetic pathway.
- C. In C_4 plants, photorespiration does not occur.
- D. C_3 plants exhibit 'Kranz' anatomy.
- E. ATP synthesis in chloroplast occurs through chemiosmosis.

Choose the answer from the options given below :

[NEET (UG) 2026]

- (1) B and C only (2) B and E only
- (3) B only (4) A and D only

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Q.2 Which pigment has absorption peak at 700 nm in the photosynthetic reaction centre PS I (P700)?

[RE-NEET (UG) 2026]

- (1) Carotenoids (2) Chlorophyll b
- (3) Chlorophyll a (4) Xanthophylls

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Q.3 Which of the following are required for the light reaction of Photosynthesis?

- A. CO_2 B. O_2
- C. H_2O D. Chlorophyll
- E. Light

Choose the correct answer from the options given below:

[RE-NEET (UG) 2024]

- (1) A, C, D and E only (2) C, D and E only
- (3) A and B only (4) A, C and E only

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Q.4 Which one of the following products diffuses out of the chloroplast during photosynthesis?

[RE-NEET (UG) 2024]

- (1) ADP (2) NADPH (3) O_2 (4) ATP

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Q.5 The reaction centre in PS II has an absorption maximum at [NEET (UG) 2023]

- (1) 700 nm (2) 660 nm (3) 780 nm (4) 680 nm

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Q.6 In light reaction, plastoquinone facilitates the transfer of electrons from [NEET (UG) 2020]

- (1) PS-I to ATP synthase
- (2) $Cytb_6f$ complex to PS-I
- (3) PS-I to $NADP^+$
- (4) PS-II to $Cytb_6f$ complex

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Q.7 Which of the following is not a product of light reaction of photosynthesis? [NEET 2018]

- (1) Oxygen (2) NADH (3) ATP (4) NADPH

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Q.8 Emerson's enhancement effect and Red drop have been instrumental in the discovery of

[NEET 2016 (Phase 1)]

- (1) photophosphorylation and cyclic electron transport
- (2) oxidative phosphorylation
- (3) photophosphorylation and non-cyclic electron transport
- (4) two photosystems operating simultaneously.

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Q.9 Electrons from excited chlorophyll molecule of photosystem II are accepted first by [AIPMT 2008]

- (1) quinone (2) ferredoxin
- (3) cytochrome-b (4) cytochrome-f

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Q.10 Which pigment system is inactivated in red drop?

[AIPMT 2001]

- (1) PS-I and PS-II (2) PS-I
- (3) PS-II (4) None of the above

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Q.11 The first acceptor of electrons from an excited chlorophyll molecule of photosystem II is

[AIPMT 2007]

- (1) iron-sulphur protein (2) ferredoxin
(3) quinone (4) cytochrome

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Q.12 In photosystem I, the first electron acceptor is

[AIPMT 2006]

- (1) an iron-sulphur protein
(2) ferredoxin
(3) cytochrome
(4) plastocyanin

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Q.13 The first step for initiation of photosynthesis will be

[AIPMT 2000]

- (1) photolysis of water
(2) excitation of chlorophyll molecules due to absorption of light
(3) ATP formation
(4) glucose formation

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	3	2	3	4	4	2	4	1	3	3
Ques.	12	13									
Ans.	1	2									