

PHOTOSYNTHESIS

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| <p>1. The law of limiting factor for photosynthesis was enunciated by
 (a) Blackmann (b) Hill
 (c) Ruben (d) Kamen</p> <p>2. "Photosynthesis is the conversion of light within a plant" was first stated by
 (a) Willstatter and Stoll
 (b) Mayer and Anderson
 (c) Benson and Calvin
 (d) Robert Mayer</p> <p>3. "Thylakoid" name was given by
 (a) Arnon (b) Park and Biggins
 (c) Park and Fortan (d) Manke</p> <p>4. "Impure air is purified in the presence of light and green plants" was first said by
 (a) De Saussure
 (b) Priestley
 (c) Van Helmont
 (d) Ingenhouz</p> <p>5. Scientist who first discovered the role of light in photosynthesis
 (a) Sachs (b) Priestley
 (c) Senebier (d) Ingenhousz</p> <p>6. The process of photophosphorylation was discovered by
 (a) Calvin (b) Arnon
 (c) Priestley (d) Warburg</p> <p>7. The first experiment on photosynthesis in flashing light were carried out by
 (a) F.F. Blackmann
 (b) Robert Emerson and Arnold
 (c) Melvin Calvin
 (d) Robert Hill</p> | <p>8. Who received the Noble Prize for working out the early carbon pathway of photosynthesis
 (a) Calvin (b) Krebs
 (c) Khorana (d) Watson</p> <p>9. Action spectrum of photosynthesis was first studied by
 (a) Blackmann (b) Van Mayer
 (c) Engelmann (d) Boussingault</p> <p>10. Hypothesis for oxygen coming from water was put forward by
 (a) Hill (b) Warburg
 (c) Blackmann (d) Mendel</p> <p>11. The two pigment system theory of photosynthesis was proposed by
 (a) Hill (b) Blackmann
 (c) Emerson (d) Arnon</p> <p>12. C₄ - cycle was discovered by
 (a) Hatch and Slack (b) Calvin
 (c) Hill (d) Arnon</p> <p>13. ATP formation in chloroplast and mitochondrion is explained by
 (a) Cholondny-Went model
 (b) Chemi-osmotic theory of Mitchell
 (c) Munch's mass flow theory
 (d) Relay pump theory of Godlewski</p> <p>14. Who first of all indicated that water is electron donor in photosynthesis
 (a) Arnon (b) Calvin
 (c) Blakeslee (d) Van Niel</p> <p>15. The term 'chromatophore' was coined by
 (a) Schmitz (b) Comparethi
 (c) W. Pfeffer (d) Singer and Nicolsan</p> |
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| 16. This scientist suggested that there are two stages in photosynthesis, dark and light
(a) Melyin Calvin (b) Martin Ruben
(c) F.F. Blackmann (d) Stephen Hales | 23. In photosynthesis, plants
(a) Absorb O ₂ and release CO ₂
(b) Absorb CO ₂ and release O ₂
(c) Absorb NH ₃ and release N ₂
(d) Absorb N ₂ and release NH ₃ |
| 17. Persons who received Noble Prizes for their work with green plants are
(a) Calvin and Weaton
(b) Calvin and Borlaug
(c) Beadle and Tatum
(d) Flemming and Waksman | 24. Which fractions of the visible spectrum of solar radiations are primarily absorbed by carotenoids of the higher plants
(a) Violet and blue (b) Blue and green
(c) Green and red (d) Red and Violet |
| 18. The first important biological investigation which led to the conclusion that plant makes its substance from water and not from soil was carried out by
(a) Lamarck (b) De Vries
(c) Von Helmont (d) Darwin | 25. Thylakoids, present in chloroplast contains a cellular organelle in which there occurs light reaction. The organelle is
(a) Grana (b) Stroma
(c) Lamellae (d) Outer membrane |
| 19. The oxygen produced during photosynthesis comes from photolysis of water was first time proved by
(a) Roben and Kamen
(b) Robert Mayer
(c) Melvin Calvin
(d) Blackmann | 26. Which pigment is present universally in all green plants
(a) Chlorophyll - a (b) Chlorophyll - b
(c) Chlorophyll - c (d) Chlorophyll - m |
| 20. A pigment which absorbs red and far-red light is
(a) Phytochrome (b) Carotene
(c) Cytochrome (d) Xanthophyll | 27. Which one of the following statements about cytochrome P ₄₅₀ is wrong
(a) It has an important role in metabolism
(b) It contains ion
(c) It is a coloured cell
(d) It is an enzyme involved in oxidation reactions |
| 21. Which was first photosynthesis organism
(a) Green algae (b) Red algae
(c) Cyanobacteria (d) None of these | 28. P ₇₀₀ is a special form of which pigment
(a) Chlorophyll b (b) Carotenes
(c) Chlorophyll a (d) Phycobilins |
| 22. Photosynthetic pigments in chloroplast are embedded in membrane of
(a) Thylakoids
(b) Photoglobin
(c) Matrix
(d) Envelope of chloroplast | 29. Compensation point refers to
(a) Little photosynthesis
(b) Beginning of photosynthesis
(c) Rate of photosynthesis equals to the rate of respiration
(d) None of these |

30. Plants are known as purifiers of air due to process of
 (a) Respiration (b) Photosynthesis
 (c) Transpiration (d) Desiccation
31. Which one of Cu^{++} containing pigment
 (a) Ferredoxin (b) Plastocyanin
 (c) Plastoquinone (d) Cytochrome
32. The most vital process for the existence of life on earth is
 (a) Communication in animals
 (b) Photosynthesis by plants
 (c) Reproduction in plants and animals
 (d) Respiration in animals
33. The core metal of chlorophyll is
 (a) Fe (b) Mg
 (c) Ni (d) Cu
34. The ultraviolet radiations from the sun cause reactions that produce
 (a) Carbon monoxide
 (b) Carbon dioxide
 (c) Ozone
 (d) Fluorides
35. CO_2 is formed in all of the following except
 (a) Burning of sugar
 (b) Respiration in plants
 (c) Photosynthesis by plants
 (d) On heating on limestone
36. Chloroplast fixes
 (a) O_2 (b) H_2
 (c) CO_2 (d) N_2
37. Which pigment is absent in chloroplast
 (a) Xanthophyll (b) Anthocyanin
 (c) Chlorophyll 'a' (d) Carotene
38. Two chief functions of leaves are
 (a) Photosynthesis and respiration
 (b) Photosynthesis and transpiration
 (c) Transpiration and respiration
 (d) Respiration and digestion
39. Chlorophyll is present
 (a) On the surface of chloroplast
 (b) In the stroma of chloroplast
 (c) In the grana of chloroplast
 (d) Dispersed throughout the chloroplast
40. Quantasomes contains
 (a) 200 chlorophyll molecules
 (b) 230 chlorophyll molecules
 (c) 250 chlorophyll molecules
 (d) 300 chlorophyll molecules
41. The gas absorbed during photosynthesis is
 (a) Oxygen (b) Nitrogen
 (c) Ammonia (d) Carbon dioxide
42. The process of taking CO_2 by plants and releasing O_2 is termed as
 (a) Endosmosis (b) Photosynthesis
 (c) Transpiration (d) Respiration
43. The brown colour of some algae is due to presence of pigments
 (a) Chlorophyll (b) Phycocyanin
 (c) Carotene (d) Fucoxanthin
44. The site of oxygen evolution and photosynthetic phosphorylation in chloroplast are
 (a) Matrix
 (b) Grana stacks
 (c) Inner wall of chloroplast
 (d) Surface of chloroplast

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| <p>45. Which one is the precursor of chlorophyll</p> <ul style="list-style-type: none">(a) Bacteriochlorophyll(b) Bacterioviridin(c) Tryptophane(d) Chlorophyllide <p>46. Grana refers to</p> <ul style="list-style-type: none">(a) Stacks of thylakoids in plastids of higher plants(b) A constant in quantum equation(c) Glycolysis of glucose(d) Bye product of photosynthesis <p>47. Intact chloroplast from green leaves can be isolated by</p> <ul style="list-style-type: none">(a) Acetone (b) Ethanol(c) Alcohol (d) Sugar solution <p>48. The maximum evolution of oxygen is by greatest producers of organic matter</p> <ul style="list-style-type: none">(a) Greater land area(b) Crops(c) Phytoplankton of sea(d) Forests | <p>49. The basic structure of all chlorophyll comprises of</p> <ul style="list-style-type: none">(a) Porphyrin system(b) Cytochrome system(c) Plastocyanin system(d) Flavoproteins only <p>50. During photosynthesis</p> <ul style="list-style-type: none">(a) Both CO₂ and water get oxidized(b) Both CO₂ and water get reduced(c) Water is reduced and CO₂ is oxidized(d) Carbon dioxide gets reduced and water get oxidized |
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ANSWERS KEY

1	A	11	C	21	C	31	B	41	D
2	D	12	A	22	A	32	B	42	B
3	D	13	B	23	B	33	B	43	D
4	B	14	D	24	A	34	C	44	B
5	D	15	A	25	A	35	C	45	D
6	B	16	C	26	A	36	C	46	A
7	B	17	B	27	C	37	B	47	A
8	A	18	C	28	C	38	B	48	C
9	C	19	A	29	C	39	C	49	A
10	A	20	A	30	B	40	B	50	D