



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET - 21 (SOLUTIONS)

Class: IX

Sub: LIFE SCIENCE

Date: 30.04.2020

Topic: Photosynthesis: Action spectra, Absorption spectra and photophosphorylation

F.M. : 15

Choose the correct option:

(1x15=15)

- Light is essential during photosynthesis for:
a) Heating of plants b) Opening of stomata c) Photolysis of water d) Evolution of hydrogen
Answer : Photolysis of water (c)
- The photo chemical effect of different wavelengths of light on photosynthesis is called:
a) Action spectra b) Absorption spectra c) visible spectra d) none of these
Answer: Action spectra (a)
- The action spectra of photosynthesis shows the following lights to be most efficient:
a) Yellow light b) blue light c) red light d) both blue and red light
Answer : Both blue and red light (d)
- The absorption spectra includes:
a) Part of spectra absorbed b) part of spectra absorbed by different wavelengths of light c) activity of the pigment in different wavelengths d) none of the above
Answer : Part of spectra absorbed by different wavelengths of light (b)
- Photosynthesis consists of phases
a) three b) two c) one d) four
Answer: two (b)
- The following light is not absorbed for photosynthesis:
a) Red b) yellow c) green d) blue
Answer : Green (c)
- The first phase of photosynthesis is called photochemical because
a) Redox reactions take place b) presence of light is mandatory c) enzyme play a chief role d) Both (a) and (b)
Answer: Both (a) and (b) (d)

8. The scientist/s who discovered the details of dark reaction (C₃ Cycle):
a) Hatch and Slack b) Calvin and Bassham c) Blackman d) Robert Hill
Answer: Calvin and Bassham (b)
9. Dark phase is called so because :
a) It takes place at night b) enzymes are required c) it is light independent d) All of these
Answer : it is light independent (c)
10. The first stable product of Calvin cycle:
a) 3- Phosphoglyceric acid b) 2-phosphoglyceric acid c) 3 Phosphoglyceraldehyde
d) phosphor enol pyruvic acid
Answer: 3-Phosphoglyceric acid (a)
11. Hill reaction is the other name for :
a) Photosynthesis b) photolysis c) photophosphorylation d) phosphorylation
Answer: Photolysis (b)
12. is also called Hill's reagent:
a) H₂O b) NADPH₂ c) ATP d) Chlorophyll
Answer: NADPH₂ (b)
13. Oxygen liberated during photosynthesis is :
a) Equal to the carbon dioxide taken b) Less than CO₂ taken c) More than CO₂ taken in d) none of the above
Answer: Equal to the carbon dioxide taken (a)
14. In photosynthesis O₂ is liberated due to:
a) Light reaction b) Photophosphorylation c) Photolysis d) none of these
Answer: Photolysis (c)
15. Photophosphorylation results in :
a) Generation of ATP b) generation of NADPH₂ c) synthesis of glucose d) none of these
Answer : Generation of ATP (a)

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