



# ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

## WORK SHEET - 21

Class: IX

Sub: LIFE SCIENCE

Date: 30.04.2020

**Topic: Photosynthesis: Action spectra, Absorption spectra and photophosphorylation**

**F.M. : 15**

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**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
- 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
- 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
- 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
- Photosynthesis consists of ..... phases  
a) three b) two c) one d) four
- The following light is not absorbed for photosynthesis:  
a) Red b) yellow c) green d) blue
- 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)
- The scientist/s who discovered the details of dark reaction (C<sub>3</sub> Cycle):  
a) Hatch and Slack b) Calvin and Bassham c) Blackman d) Robert Hill
- 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
- The first stable product of Calvin cycle:  
a) 3- Phosphoglyceric acid b) 2-phosphoglyceric acid c) 3 Phosphoglyceraldehyde d) phosphor enol pyruvic acid

11. Hill reaction is the other name for :
- a) Photosynthesis b) photolysis c) photophosphorylation d) phosphorylation
12. .... is also called Hill's reagent:
- a)  $H_2O$  b)  $NADPH_2$  c) ATP d) Chlorophyll
13. Oxygen liberated during photosynthesis is :
- a) Equal to the carbon dioxide taken b) Less than  $CO_2$  taken c) More than  $CO_2$  taken in d) none of the above
14. In photosynthesis  $O_2$  is liberated due to:
- a) Light reaction b) Photophosphorylation c) Photolysis d) none of these
15. Photophosphorylation results in :
- a) Generation of ATP b) generation of  $NADPH_2$  c) synthesis of glucose d) none of these

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