

Activity Code:- 1903014021

## B.Sc 6<sup>th</sup> Semester (Honours) Examination, October-2020

### BOTANY

Course ID: 61311

Course Code: SH/BOT/601/C-13

#### Course Title: Plant Metabolism

Full marks: 15

Time: 1 hr

*The figures in the right hand side margin indicate marks*

Answer all the Questions

#### UNIT- I

1. Answer any five questions from the following: 1×5=5

- a) What do you mean by action spectrum of chlorophyll?
- b) What is ammonification?
- c) Cite one non-reversible reaction of Glycolytic pathway.
- d) Why the breakdown of lipid is often called beta oxidation?
- e) Why C<sub>2</sub> cycle is called photorespiration?
- f) What is Q cycle?
- g) What is isozyme?
- h) Mention the role of Nif gene.
- i) Mention one substrate level phosphorylation reaction.
- j) Give example of one plant where cyanide resistant respiration is found.

#### UNIT - II

2. Answer any two questions from the following: 5×2=10

- a) State the characteristic features of C<sub>4</sub> plants. Why do CAM plants close their stomata during day-time? 4+1=5
- b) With suitable schematic diagram discuss the mechanism of light driven ATP synthesis. =5
- c) Schematically illustrate the glycolysis mentioning enzymes involved. =5
- d) Explain why Ca<sup>++</sup> is considered as secondary messenger in signal transduction? =5
- e) Schematically represent the biochemistry of N<sub>2</sub> fixation. =5