

**B.Sc. Semester-V (Honours) Examination, 2021 (CBCS)**

**Subject: Botany**

**Paper: CC-12 (Plant Metabolism)**

**Time : 2 Hours**

**Full Marks : 40**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**Answer any eight questions from the following**

**8x5=40**

1. Differentiate between anabolism and catabolism with suitable examples. What is isozyme?
2. Schematically describe a double carboxylation mechanism in plants.
3. Mention different fates of Pyruvate during respiration.
4. Give an idea of the structural organization of ATP synthase.
5. What is  $\beta$ -oxidation? Give a brief account on beta  $\beta$ -oxidation pathway.
6. What is leghaemoglobin? Mention its role in symbiotic  $N_2$  fixation.
7. Comment on the significance of nitrification and denitrification. Mention the names of two microorganisms involved in each processes.
8. Distinguish between cyclic and non-cyclic electron flow during Z-scheme of Photosynthesis.
9. Discuss the role of cAMP as second messenger.
10. Write short note on Q-cycle associated with respiratory electron transport.

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