

B.Sc. SEM-5 (Hons.) Examination-2020

Subject- Botany (Hons)

Paper – CC-12

Plant Metabolism

Full Marks –40

Time – 2 hrs

1. Answer any eight questions from the following: - 5x8=40
- A. State the characteristic features of C₄ plants. Why do CAM plants close their stomata during daytime? 4+1=5
 - B. Schematically elaborate the Glycolysis process in plants. What is the full form of NADPH? 4+1=5
 - C. Elaborate the β-Oxidation pathway for lipid metabolism, schematically. 5
 - D. Describe the symbiotic Nitrogen fixation pathway in plants 5
 - E. What is Photorespiration? Elaborate the process with suitable diagram 1+4 = 5
 - F. Elaborate the carboxylation steps in the Calvin cycle. Name the aldopentose and Ketopentose produced during the regeneration of this cycle 4+1=5
 - G. With the help of diagram briefly elaborate the process of ATP synthesis. 5
 - H. Briefly comment on the Oxidative Phosphorylation process in plants. 5
 - I. Discuss the factors effecting respiration in plants. What is cAMP? 4+1=5
 - J. Schematically represent the Non-cyclic electron transport chain. 5