

1. Please describe the metabolic functions of sulfur in plants? (15 %)
2. What are the possible functions of ATP involving the ion transport of plant roots? (10 %)
3. How to describe the yield components of a rice cultivar? (10 %)
4. What are the theory and application of DNA microarray on plant research? (10 %)
5. What are the possible strategies to increase the production of target chemicals in the medical plants? (5 %)
6. Describe some examples (at least two) of the contribution of Rothamsted Experiment Station in modern plant nutrition. (5 %)
7. Discuss the reasons why the lower Ca and B concentrations are found in monocotyledons than in dicotyledons. (5 %)
8. Describe the symptoms of plant appeared under N, P, and K deficiency, respectively and give the reasons. (10 %)
9. Discuss the meaning and significance of the term “remobilization”, “redistribution”, and “retranslocation” in relation to the process of plant growth. (10 %)
10. Describe the physiological functions of plants which are highly regulated by the plasmalemma H^+ -ATPase. (10 %)
11. Why do most plants grow poorly under very acid or alkaline soil conditions? What is the optimum pH of the medium (or soil) for plant growth? Why? (10 %)