

ARUNACHAL PRADESH PUBLIC SERVICE COMMISSION

Subject: - HORTICULTURE SCIENCE - PAPER - II

Time: 3 (three) hours

Full Marks: 100

Q.1 Classify plant diseases. What are the causes of disease? What are the various stages of disease development? **(4+2+4=10)**

Q.2 Write briefly on the aetiology, system and method of spread, epidemiology, causal organism and control measure of any one important disease of the following crops (any one crop from each group) **(10x3=30)**

Group A-	a. Banana	b. citrus
Group B-	a. Cucurbitaceous crops	b. Potato
Group C-	a. Rose	b. Tube rose

Q.3 Answer the following (**any six**)

- A.** What is a weed? Classify them. Suggest suitable measures for the control of weeds. **(1+3+6=10)**
- B.** What are nematodes? Write briefly on its pathogenesis, lifecycle, nature of damage and their control measures. **(1+1.5 + 2 + 2.5+3=10)**
- C.** What are hormones? What are their physiological effect on growth and development of plants? Why pineapple plants respond better to foliar application rather than soil application of nutrients? How growth regulators be utilized for regulation of flowering and fruiting in pineapple? **(1+5+1 + 3=10)**
- D.** What are the objectives of extension education? Discuss briefly on its role in the horticultural and rural development. Define rural psychology; discuss its importance. **(2+4 +1 + 3 =10)**
- E.** What is macro and micro economics? Illustrate the 'law of diminishing return'. Write briefly on the principles involved in farm management. What is the significance of record keeping in farm management? **(2 + 2 + 4 + 2 = 10)**
- F.** What do you understand by the 'soil-plant-water relationship'? Illustrate the various systems of soil and water conservation. What are the structures and practices adopted to control erosion by water? **(1.5 + 1.5 + 4 + 3=10)**

- G. What do you mean by maturity? What are the differences in the harvest indices for climacteric and non-climacteric fruits? Write briefly on the post harvest factors effecting shelf life of fruits and vegetables. What are the various biochemical changes associated with the ripening of fruits? **(1 + 1.5 + 5.5 + 2=10)**
- H. Discuss the various types of storage used for enhancing shelf life of fruits and vegetables. What are the advantages of packaging? Write briefly on the various principles of preservation. **(5 + 2 + 3 = 10)**
- I. Define marketing. How markets be classified? What are the constraints of marketing of Horticultural produces in Arunachal Pradesh? How it can be overcome? What is the role of the government in promoting marketing in Arunachal Pradesh? **(1 + 2 + 4 + 3 = 10)**
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