



**NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT  
SYLLABUS FOR THE WRITTEN EXAMINATION FOR THE POST OF  
ASSISTANT MANAGER IN GRADE 'A'**

**HORTICULTURE / PLANTATION**

(The syllabus is illustrative and not exhaustive. The syllabus should not be considered as the only source of information while preparing for the examination. Keeping in view the nature of examination, all matters falling within the realm of the subject concerned will have to be studied by the candidate as questions can be asked on all relevant matters under the subject. Candidates appearing for the examination should also prepare themselves for answering questions that may be asked on the current/latest developments/Acts taking place under the subject(s) although those topics may not have been specifically included in the syllabus.)

**I. Fruit & Plantation Crops:**

Fruit and plantation crops industry in India, its status and potentialities. Agro climatic distribution of different crops. Methods of propagation; mist propagation and other advances made in clonal propagation and micro propagation (tissue culture), physiological basis of root initiation and rooting co-factors. Rootstocks for different crops and rootstock scion incompatibility. Use of plant growth regulators, retardants, inhibitor and their role in setting, growth, development and maturity of fruits. Orchard management practices; water management, drip irrigation, training and pruning, fruit thinning and fruit drop; dormancy of seeds and buds, chilling requirement, intercropping and cropping system.

Cultivation of important fruits such as apple, walnut, mango, citrus, grape, guava, pineapple, banana, ber, pomegranate and papaya and plantation crops like coconut, arecanut, cashewnut, pepper and cardamom; new selections, varieties or hybrids developed major production problems faced, improved production technology evolved through research in these crops.

Review of the present status of chronic production problems like mango malformation, alternate bearing, spongy tissue in mango, citrus decline, guava wilt, coconut root wilt, quick wilt of pepper, 'Katte disease of cardamom etc., and success achieved through research.

**II. Fruit and Vegetable Technology:**

Importance of post harvest technology for fruit and vegetable preservation; causes of spoilage of fresh and processed products. Principles and methods of preservation like canning, dehydration, freezing, fermentation, freeze drying. Physiology of storage, problems and importance, different storage methods and their principles.

**III. Vegetables:**

Vegetable industry in India, nutritive value of vegetables, climatic requirement. Nursery management, major cultivation problems, mulching, weed control, harvesting, transport and marketing vegetable seed production, seed viability and purity. Cultivation and breeding for improvement of important vegetable crops like

cole crops, potato and other tuber crops, solanaceous vegetables, root crops, leafy vegetables, cucurbits, beans, peas, onion. Production of F1 hybrids, male sterility, heterosis, breeding.

#### **IV. Floriculture and landscape gardening:**

History of gardens in India. Theory and principles of landscape gardening, different types and styles of gardening. Propagation and care of ornamental shade and flowering trees and annuals, herbaceous perennials and shrubs of different seasons. Ornamental foliage plants and indoor gardening. Cultivation, handling and marketing of orchid, roses, gladiolus, chrysanthemum, jasmine and tuberose. Technique of raising Bonsai.