RAJASTHAN PUBLIC SERVICE COMMISSION  
Syllabus for Screening test for the Post of  
Agriculture Research Officer  
(Plant Pathology)  
Agriculture Department

1. History and Scope of Plant Pathology- History of plant pathology with particular reference to India. Major epidemics and their social impacts. Historical developments of chemicals, legislative, cultural and biological protection measures including classification of plant diseases. Scope and application of microbes in agriculture industry, pollution and biological control of pests.

   - **Mycology**: Introduction, terms and basic concepts. General Characters of fungi, types of fungal thalli, fungal tissues, modifications of thallus, reproduction in fungi (asexual and sexual). Classification of fungi. Comparative morphology, ultra structure, characters of different groups of fungi up to generic level. Importance of fungi. Mycorrhizal associations. Lichen types and importance. Fungal genetics and variability.
   - **Plant Virology**: History of plant viruses, composition and structure of viruses. Symptomatology of important pant viral diseases, transmission, Chemical and physical properties of viruses, host virus interaction, virus vector relationship. Classification, replication and movement of viruses. Isolation and purification, electron microscopy, protein and nucleic acid based diagnostics. Mycoviruses, arbo- and baculoviruses, satellite viruses, satellite RNAs, viroids and prions.


8. Mushroom production Technology
Mushroom cultivation, food, medicinal value, uses of mushroom, edible and poisonous mushrooms. Life cycle of cultivated mushrooms, maintenance of pure culture, preparation of spawn and facilities required for establishing commercial spawn lab.

Pattern of question papers:
1. Objective type paper
2. Maximum marks : 100
3. Number of question : 100
4. Duration of paper : Two hours
5. All question carry equal marks
6. There will be negative marking.

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