

National Institute of Plant Health Management, Hyderabad

(An autonomous organization under the Ministry of Agriculture & Farmers Welfare Government of India)

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INDICATIVE SYLLABUS (as per applicability):

Name of the post	Syllabus
Financial Advisor	<ol style="list-style-type: none">1. GFR Rules2. Accounting Standards3. Central Government FR&SR Rules4. All relevant tax laws5. CVC guidelines6. Tender procedure in Government7. Delegation of financial power rules
Assistant Scientific Officer (Plant Pathology)	<ol style="list-style-type: none">1. Pesticide classification on use, chemical nature, formulation, toxicity and action etc.2. Various methods in Pesticide Formulation Analysis3. Principles, operation and application of various chromatographic techniques4. Pesticide Dissipation, Residue Dynamics, Different methods /Steps in residue analysis5. Confirmative analytical techniques in residue analysis6. Different terminologies used in Pesticide Residue Analysis7. Maximum Residue levels in pesticide8. Pesticide Management
Technician (Mechanic)	<ol style="list-style-type: none">1. Engines & its components2. Fundamental of sprayers3. Basics of welding, fitting, carpentry & smitting4. Knowledge of tools5. Pumps & its components
Lab Attendant (Cat I)	<p>(a) <u>Vocational (Crop Production)</u></p> <ol style="list-style-type: none">1. Professional attitude, knowledge and skill of field work especially in crop production.2. Elementary knowledge on soil sampling, use of agriculture implements in farm and their maintenance.3. Tillage &Tilth, characteristics of a good seedbed.4. Different methods of sowing and transplanting, time and depth of sowing for major agricultural crops.5. Factors affecting optimum stand establishment. Soil fertility and soil productivity,6. Different types of weeds, weeds-importance, weed-characteristics, classification, crop weed competition, weed management principles and weed control methods.7. Pesticides types, and classification & application methods.8. Irrigation management – Different methods of irrigation, micro irrigation, rain water harvesting management and moisture conservation, fertigation, drainage and its advantage.9. Crop nutrition- Essential elements – Importance of major, secondary and micro nutrients.10. Manures and fertilizers- Classification – Nutrient content- Nutrient use efficiency– Factors effecting nutrient use efficiency.11. Maturity symptoms – Harvesting and threshing of major agricultural and horticultural crops.

	<ol style="list-style-type: none"> 12. Biological control, integrated pest management, integrated nutrient management, nursery raising techniques and transplanting. 13. Types of agricultural implements, 14. practice of different cultural operations, 15. practice of puddling, 16. participation in ongoing field operations. 17. Calculation of seed rate, manure, fertilizer and their application methods. 18. Different inter-cultivation practices, methods of preparing compost and vermi compost. 19. Growth stages of various crops. 20. Nursery raising, seed treatment, preparation of seed-bed, seed sowing, seedling transplanting. 21. Methods of pesticide application using different spray techniques. <p>(b) <u>For ITI (Mechanic Agriculture)</u></p> <ol style="list-style-type: none"> 1. Safety precaution and first aid 2. Importance of maintenance and cleanliness of workshop 3. General cleaning, checking and use of nuts, bolts and studs etc 4. Tractor specification data-assembly of tractors, oil greasing and lubricating all moving parts, cleaning of tractors 5. Working principle and construction of cylinder heads, types of combustion chambers, engine & its components 6. Tractor equipment: plough, harrows, cultivators, seed drills, tractor trailer, PTO, lubrication 7. Precautions in handling farm machinery 8. Pumps: selection, types, working principles of popup, sprinkler and mister/fogger, drippers, maintenance. 9. Calibration of sprayers and dusters, care and maintenance, fogging machine 10. Safety precautions while servicing and maintenance 11. Field operations and adjustments
<p>Lab Attendant (Cat II)</p>	<ol style="list-style-type: none"> 1. Soil testing and crop production 2. Safety and environment 3. Elementary first aid and firefighting 4. Trade tools, apparatus and their standardization, calibration. 5. Identify different types of laboratory equipment 6. Preparation of standard solution and chemical reagents for soil testing. 7. Conduct different soil testing methods to determine soil texture, pH value, moisture content, Electric conductivity, hydraulic conductivity, organic carbon, cation, exchange capacity etc., 8. Knowledge of essential nutrients, planting methods, polyhouses, net houses, etc., 9. Estimation of macro and micro nutrients and also elements of environmental concern in soil samples. 10. Examine the quality of irrigation water. 11. Recommend fertilizer, dosage and their method of application based on soil properties. 12. Use of modern technology, electronic and electric equipment for collection of data and input recommendations. 13. Growing rabi and kharif crops in field, control measures for crop diseases and insects 14. Different methods of irrigation and integrated pests management. 15. Practices on different tillage, ploughing and puddling implements. 16. Practice different farm machinery viz., seed drill, tractor, power weeder, power tiller, threshers, paddy transplanter, brush cutter etc., 17. practice field preparation, calculate seed and fertilizer requirements. 18. Seed testing, processing and packaging. 19. Exercise on preparation of organic and natural farming, composting, etc.,

	<ol style="list-style-type: none"> 20. use of modern techniques for soil and moisture conservation and preservation of water. 21. Soil sample collection and preparation, cleaning and calibration of soil testing equipment/ devices.
Lab Attendant (Cat III)	<ol style="list-style-type: none"> 1. Importance of Chemistry in everyday life (Agriculture, Food, Green Chemistry) 2. Knowledge of basic chemicals used in chemistry labs like acid, base and salt. Chemical properties of acid and bases, importance of pH. Solubility of salts etc 3. Methods and reactions commonly used in chemistry labs: acid-base reaction, titration, indicator etc 4. Laboratory solutions, solutes, solvents, preparation of common Lab Solutions and reagent 5. Physical nature of matter, Melting point, boiling point, vaporization of chemicals 6. Laboratory safety protocols, hazardous and non hazardous chemicals, operation of fire extinguisher, operation of safety shower, first aid measures etc 7. Knowledge on colour code of analytical gas cylinder, hazards associated with different analytical gases, regulator pressure monitoring and changing of gas regulators 8. Procedure for storage and disposal of hazardous wastes using safety procedures 9. Assemble, disassemble and cleaning of basic lab equipment and glassware 10. Operation of water distillation unit and water purification unit 11. Basic knowledge of computer operations (MS Word, MS Excel etc)
Multi Tasking Staff (Category-II)	<ol style="list-style-type: none"> 1. Nursery Management and Propagation of Plant Material 2. Ornamental Gardening and Landscape Architecture 3. Commercial Floriculture 4. Ornamental Horticulture 5. Orchard Establishment 6. Pruning and Training 7. Digging and filling of pits 8. Plant Growth Regulators 9. Organic Farming 10. Weed Management 11. Identification of plants 12. Plant Propagation methods / techniques 13. Weed Management 14. Pest and Disease Management of Ornamental Plants 15. Lawn Maintenance / Management 16. Maintenance of records, usage of machineries, garden equipment 17. Plant Protection Methods
Multi Tasking Staff (Category III)	<ol style="list-style-type: none"> 1. General Knowledge and Current Affairs 2. General Awareness 3. Comprehension 4. Physical maintenance of records 5. Sweeping, Cleaning, Peon / Attendant duties etc. 6. Physical fitness test.

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