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REVISED SYLLABUS 2022

DEPARTMENTAL PROMOTION EXAMINATION FROM SENIOR RESEARCH OFFICER TO DIRECTOR (AGRONOMY)

PAPER-I CURRENT AFFAIRS & RULES & REGULATIONS **100 marks**
(Note: Passing in each part is mandatory to clear paper-1) (Pass marks 47)

Part-I Current Affairs **33 marks**
(Pass marks 40%)

Current Affairs paper will be set from leading issues published in the newspaper for the last 3 months. The following books may be consulted.

- Monthly Current Affairs Digest by Tariq Mahmood Dogar
- Monthly Current Affairs Digest by Dr. Safdar Mahmood
- Any other Current Affairs Digest

Part-II Rules and Regulations (Books allowed) **67 marks**
(Pass marks 50%)

- The Pakistan WAPDA Employees (E&D) Rules, 1978
- The Pakistan WAPDA Employees (Retirement) Rules, 1979
- The Pakistan WAPDA Leave Rules for WAPDA Employees 1982
- The Pakistan WAPDA TA Rules 1982
- WAPDA Act
- Conduct Rules
- Medical Attendance Rules.

Reference Books

- WAPDA Manual of General Rules amended upto 2014 (including addendums)

PAPER-II TECHNICAL **100 Marks**
(Pass marks 50)

THE PLANT ENVIRONMENT

Crops: Agriculture; concept, history, importance and scope, Branches and allied sciences in agriculture, Salient features and problems of Pakistan's agriculture, Climate, weather and seasons of Pakistan, their major characteristics and impact on crop production

Land resources and their utilization, Crop nutrition, Water resources; surface and ground water, canal system, Agro ecological zones of Pakistan, Farming systems of the country, Agro-based industries Crop classification/inventory, Crop Stand, Weed, Disease, Pests, Potential and Actual Yields, Crop Quality and Optimum Recommendation, Growing of salt tolerant crops, grasses and trees.

Soils: Soil nutrient and supply, Soil root zone (Physical and Chemical Properties), Sub soil properties, Topography, Land capability and Soil hazards (Salinization, Waterlogging, Reclamation) and Soil amendments/conditioners. Saline culture and use of saline lands.

Irrigation Water: Source and availability, Potential and actual evapo-transpiration (crop water requirement, Irrigation timing and application (methods) and efficiencies. Way and means for use of Saline Drainage Effluent, uses of Amendments and types of water desalinization bio-drainage.

FARM MANAGEMENT PRACTICES

Inventories of Actual Practices: Land including seed bed preparation, Fertilizer Methods (Type, Timing, Rate), Tillage Methods, Seeding Methods (Rate and Timing), Irrigation practices and behaviour (Type, Timing and Management), Weeding and inter culture and harvesting and Storage

Cropping Pattern: Intensities, Rotations, Crop Mixes and Poly culture, saline culture and salt tolerant crops/grasses/trees.

Farmer Decision Making Environment: Yield limiting factors and yield variability Recommendations and Decision making procedures (crop sequence when how and how much to irrigate, risk aversion methods level of decision making), Groundwater Management to meet with water deficiencies to control draw down of water.

Resources Inventory And Composite Farm Budgets: On-farm water management and drainage, Resources available to the farmers, Production and production factors prices, Govt. policies past, present and planning and outputs

Agrarian Structure and Policy: Land use, Farm size and tenure, Land revenue regulation, Land water rights interface, Type of farm operations, Distribution of farm inputs, Dejure VS Defacto Practices and Field and basin size and levelness

Computer (Information Technology): Introduction to Computer System, M.S. Word and M.S. Office: Characteristic of computer, types of computer, computer hardware and software, types of memory and functions, operating systems, input/out and storage devices, types of computer languages, programming and functions of compiler, main features of utility of MS Word, MS Excel, MS Power Point, Internet and E-mail.

Reference Books

- Economic Survey of Pakistan GOP (Latest Issue).
- Agri. Statistics of Pakistan GOP (Latest Issue).
- Annual Review, World Bank (towards environmentally and socially sustainable development 1999).
- Production of field crops by Wolfe and Kipps.
- Zaraai Diary – Agricultural Directorate, Govt. of the Punjab published by PAD & SC.
- Irrigation Principles and Practices by O.W. Esraelson.
- Training manual for Agricultural Water Management Specialist by Dewayne G. Westfall, Water Management "Technical Report No. 60".
- Microsoft Office 2007/2010, by Gary B. Shelly, Thomas J. Cashman and Misty E. Vermaat.
- Window 7 Step by Step by Joan Lambert and Joyce Cox (Available Online).

NOTE (1) One question from Computer (Information Technology) is **compulsory** to be included in Paper-II (Technical).

NOTE (2): The paper will be 50% objective and 50% subjective.

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