# HARYANA PUBLIC SERVICE COMMISSION

**BAYS NO 1-10, BLOCK-B, SECTOR - 4, PANCHKULA**

## ANNOUNCEMENT

The Commission has decided that there will be a recruitment test for the post of Agricultural Development Officer (Administrative Cadre) in Agriculture & Farmers Welfare Department, Haryana (Advertisement No. 17/2025 Published on 31.07.2025).

**Scheme / Pattern of Exam:-**

1. **Screening Test**

a) Total number of MCQs: 100
b) Total Marks: 100
c) Time duration of the Exam: 02 hours
d) All questions carry equal marks.
e) Each question will have five options. The fifth option will be meant for a situation where a candidate intends to leave the question un-attempted.
f) One-fourth mark will be deducted for each wrong answer.
g) In case a candidate neither attempts a question nor darkens the fifth option/bubble, then One-fourth mark will be deducted for each such question.
h) Any candidate not darkening any of the five circles in more than 10% questions shall be disqualified.
i) The question paper will be in English language.
j) A candidate will have to secure a minimum of 25% marks to clear the screening test.
k) Candidates four times the number of advertised posts alongwith the bracketed candidates, will be called for the next stage of selection process, provided that they have secured the minimum cut-off marks of 25%.
l) The marks obtained by the candidates in the screening test will not be counted for final selection because it is meant only for shortlisting of candidates.
m) Syllabus for Screening Test is as under: -

| Syllabus for the Screening Test |
|---|
| General Science |
| Current Events of National and International Importance |
| History of India |
| Indian and World Geography |
| Indian Culture, Indian Polity and Indian Economy |
| General Mental Ability (Reasoning and Analytical Abilities) |
| Basic numeracy (numbers and their relations, order of magnitude etc.–Class X level), Data interpretation (charts, graphs, tables, data sufficiency etc.– Class X level) |
| Haryana GK – History, Geography, Polity, Economy, Culture etc. |

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**2. Subject Knowledge Test**

a) Time duration of exam: 03 hours
b) The question paper will be in English language.
c) Total Marks: 150
d) Paper will be subjective type.
e) No candidate will be called for the interview /viva-voce test unless she/he secures a minimum of 35% marks in the test.
f) The number of the candidates called for interview will be two times alongwith the bracketed candidates if any, of the number of advertised posts provided that they have secured the minimum cut-off marks of 35%.
g) The weightage of the Subject Knowledge Test will be 87.5%

3. **Interview -** The weightage of the interview will be 12.5%.

4. The final merit list will be prepared by adding the marks of Subject Knowledge Test and interview.

5. The attendance of the candidate in all the stages of the recruitment process is mandatory.

6. The syllabus for the Subject Knowledge Test is enclosed.

**7. Date of Screening Test - <u>02.11.2025</u>**

Dated: 14.08.2025

Deputy Secretary
Haryana Public Service Commission
Panchkula

## Syllabus for Subject Knowledge Test for the post of Agricultural Development Officer (Administrative Cadre) (Advertisment No. 17/2025 Published on 31.07.2025)

## AGRICULTURE

a) Ecology and its relevance to man, natural resources, their sustainable management and conservation. Physical and social environment as factors of crop distribution and production. Agro ecology; cropping pattern as indicators of environments. Environmental pollution and associated hazards to crops, animals and humans. Climate change-International conventions and global Initiatives. Green house effect and global warming. Advance tools for ecosystem analysis-Remote Sensing (RS) and Geographic Information Systems (GIS).

b) Cropping patterns in different agro-climatic zones of the country. Impact of high-yielding and short-duration varieties on shifts in cropping patterns. Concepts of various cropping, and farming systems. Organic and Precision farming. Package of practices for production of important cereals, pulses, oil seeds, fibres, sugar, commercial and fodder crops.

c) Important features, and scope of various types of forestry plantations such as social forestry, agro-forestry, and natural forests: Propagation of forest plants. Forest products. Agro-forestry and value addition. Conservation of forest flora and fauna.

d) Weeds, their characteristics, dissemination and association with various crops; their multiplications; cultural, biological, and chemical control of weeds.

e) Soil-physical, chemical and biological properties. Processes and factors of soil formation. Soils of India. Mineral and organic constituents of soils and their role in maintaining soil productivity. Essential plant nutrients and other beneficial elements in soils and plants. Principles of soil fertility, soil testing and fertiliser recommendations, integrated nutrient management Biofertilizers. Losses of nitrogen in soil nitrogen-use efficiency in submerged rice soils, nitrogen fixation in soils. Efficient phosphorus and potassium use. Problem soils and their reclamation. Soil factors affecting green house gas emission.

f) Soil conservation, integrated watershed management. Soil erosion and its management. Dry land agriculture and its problems. Technology for stabilising agriculture production in rainfed areas.

g) Water-use efficiency in relation to crop production, criteria for scheduling irrigations, ways and means of reducing run-off losses of irrigation water. Rainwater harvesting. Drip and sprinkler irrigation. Drainage of water-logged soils, quality of irrigation water, effect of industrial effluents on soil and water pollution. Irrigation projects in India.

h) Farm management, scope, importance and characteristics, farm planning Optimum resource use and budgeting. Economics of different types of farming Systems. Marketing management strategies for development, market Intelligence. Price fluctuations and their cost; role of co-operatives in agricultural economy, types and systems of farming and factors affecting them Agricultural price policy. Crop Insurance.

i) Agricultural extension, its importance and role, methods of evaluation of extension programmes, socio-economic survey and status of big, small and marginal farmers and landless agricultural labourers; Training programmes for extension workers. Role of Krishi Vigyan Kendra's (KVK) in dissemination of Agricultural technologies. Non-Government Organisation (NGO) and self-help group approach for rural development.

j) Cell structure, function and cell cycle. Synthesis, structure and function of genetic material. Laws of heredity. Chromosome structure, chromosomal aberrations, linkage and cross-over, and their significance in recombination breeding, Polyploidy, euploids and aneuploids. Mutation-and their role in crop improvement. Heritability, sterility and incompatibility, classification and their application in crop improvement. Cytoplasmic inheritance, sex-linked, sex-influenced and sex-limited characters.

k) History of plant breeding. Modes of reproduction, selfing and crossing techniques. Origin, evolution and domestication of crop plants, center of origin, law of homologous series, crop genetic resources-conservation and utilization. Application of principles of plant breeding, improvement of crop plants. Molecular markers and their application in plant improvement. Pure-line selection, pedigree, mass and recurrent selections, combining ability, its significance in plant breeding. Heterosis and its exploitation. Somatic hybridization. Breeding for disease and pest resistance. Role of interspecific and intergeneric hybridization. Role of genetic engineering and biotechnology in crop improvement Gernetically modified crop plants.

l) Seed production and processing technologies. Seed certification, Seed testing and storage. DNA finger printing and seed registration. Role of public and private sectors in seed production, and marketing. Intellectual Property Rights (IPR) issues, WT issues and its impact on Agriculture.

m) Principles of Plant Physiology with reference to plant nutrition, absorption, translocation and metabolism of nutrients. Soil-water-plant relationship.

n) Enzymes and plant pigments; photosynthesis-modern concepts and factors affecting the process, aerobic and anaerobic respiration; C3, C4 and CAM mechanisms. Carbohydrate, protein and fat metabolism. Growth and development; photoperiodism and vernalization. Plant growth substances and their role in crop production. Physiology of seed development and germination; dormancy. Stress physiology-draught, salt and water stress.

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o) Major fruits, plantation crops, vegetables, spices and flower crops. Package practices of major horticultural crops. Protected cultivation and high tech horticulture. Post-harvest technology and value addition of fruits and vegetables. Landscaping and commercial floriculture. Medicinal and aromatic plants. Role of fruits and vegetables in human nutrition.

p) Diagnosis of pests and diseases of field crops, vegetables, orchard and plantation crops and their economic importance. Classification of pests and diseases and their management. Intergrated pest and diseases management. Storage pests and their management. Biological control of pests and diseases. Epidemiology and forecasting of major crop pests and diseases. Plant quarantine measures. Pesticides, their formulation and modes of action.

q) Food production and consumption trends in India. Food security and growing population-vision 2020. Reasons for grain surplus. National and International food policies. Production, procurement, distribution constraints. Availability of food grains, per capita expenditure on food. Trends in poverty, Public Distribution System and Below Poverty Line population, Targeted Public Distribution System (PDS), policy implementation in context to globalization. Processing constraints. Relation of food production to National Dietary Guidelines and food consumption pattern. Food based dietary approaches to eliminate hunger. Nutrient deficiency-Micro nutrient deficiency: Protein Energy Malnutrition or Protein Calorie Malnutrition (PEM or PCM), Micro nutrient deficiency and HRD in context of work capacity of women and children. Food grain productivity and food security.

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