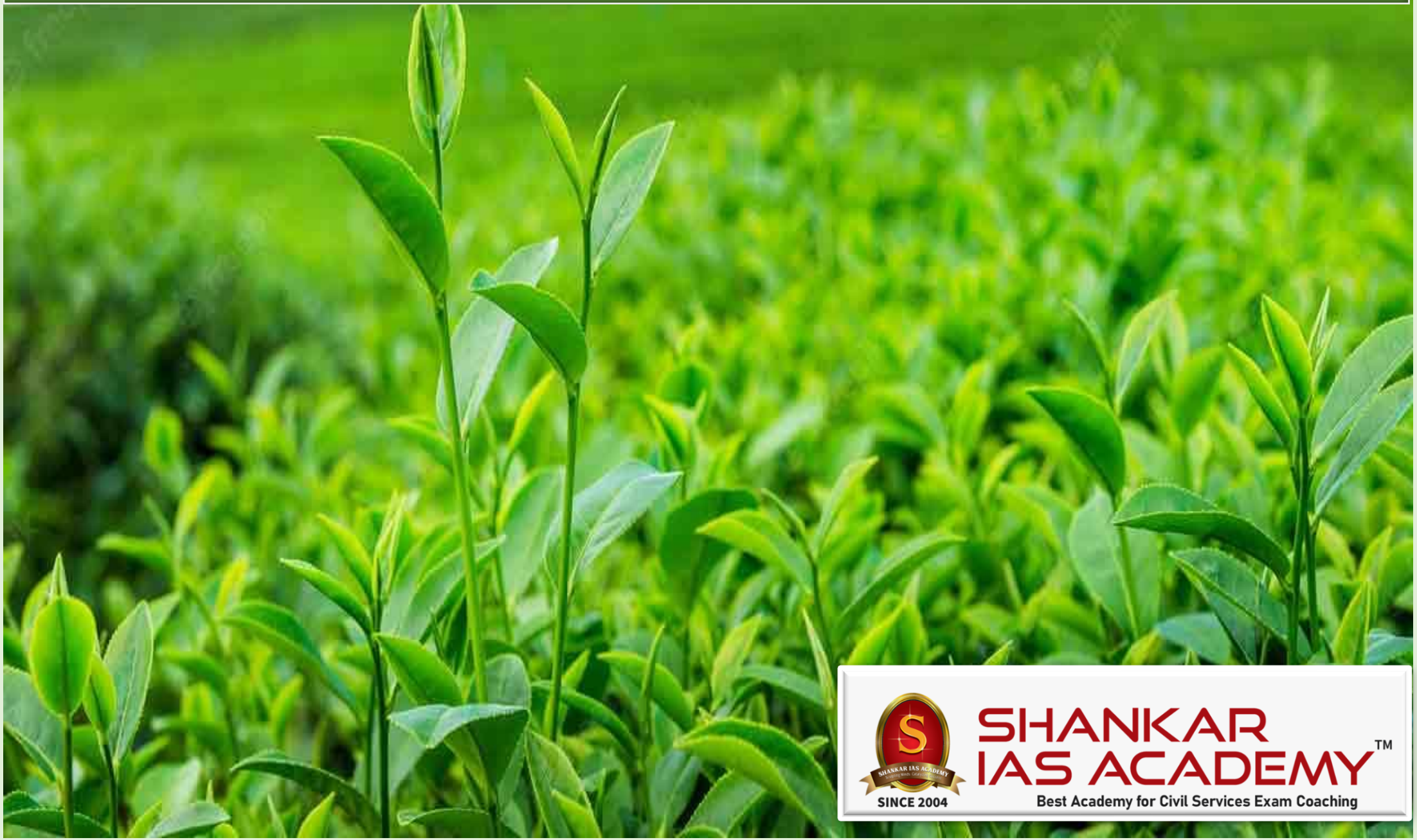
AGRICULTUREAL OPTIONAL – TEST SCHEDULE 2025 (VETERANS)



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Why Shankar IAS?

- **Consistently producing UPSC Toppers with Agriculture Optional for the last 9 years.**
- **Carefully designed test schedule to achieve 300+ in the Optional paper.**
- **There will be a total of 8 Tests divided into 4 Sectional test and 4 Full Syllabus Tests.**
- **More than 75% of the questions reflected in CSE 2024.**
- **All the test papers are equivalent with the UPSC Mains exam pattern**
- **Detailed Answers for all questions will be provided**
- **Toppers' Answer copy will be shared in the test batch telegram channel.**
- **One-on-one feedback with Faculty**
- **Answer writing strategy and answers for all tests will be discussed after every test.**
- **Fee – Rs.9,000 for New Students. Rs.7,500 for Old Students.**
- **Test batch orientation – 08.06.2025. Test starts from 20.06.2025**

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Some of our recent Toppers....

CSE 2024

Saranya **AIR 125** 		**Apsara** **AIR 192**  APSARA N 04.04.2024		**Pushparaj** **AIR 304** 
Hariprasath **AIR 407** 		**Kavinmozhi** **AIR 546** 		**Mohanapourani** **AIR 726** 

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IFoS 2024

Nila Bharathi - AIR 24 (Tamil Nadu Topper)	Sumant AIR 37	Lochan Bopanna AIR 69	Bibisha AIR 88	Vishwas AIR 98
				

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Some of our successful candidates from Agriculture Test Series

Vinay Sunil Patil
(CSE 2023)

Shubam Pawar
(CSE 2023)

Devi Priya Ajith
(CSE 2022)

Ramakrishna Saran
(CSE 2022)

Swathi Sree T
(CSE 2021)

Rahul Gowda
(IFoS 2023)

Sowmya R A
(IFoS 2023)

WALE AKSHAY POPAT
(IFoS 2023)

Aseem
(IFoS 2023)

Kaaviya
(IFoS 2021)

Menaga
(IFoS 2021)

Valli
(IFoS 2021)

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AGRICULTURAL TEST SCHEDULE 2025 (VETERANS)

Test No	Date	Detailed Syllabus	Reference Books
1.	20.06.2025	**Ecology and Environment, Cropping System and Forestry** ▪ 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. ▪ Greenhouse effect and global warming. ▪ Advance tools for ecosystem analysis—Remote Sensing (RS) and Geographic Information Systems (GIS). **Cropping System** ▪ Cropping patterns in different agro-climatic zones of the country.	**Agriculture Optional Material by R.Kanagaraj** Or ▪ Ecology and Environment - P.D.Sharma ▪ NCERT – 12th Biology Chapter Ecology

		▪ 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. **Forestry** ▪ Important features and scope of various types of forestry plantations such as social forestry, agroforestry, and natural forests. ▪ Propagation of forest plants. ▪ Forest products. Agroforestry and value addition. ▪ Conservation of forest flora and fauna.	▪ Agritech portal by TNAU ▪ Principles of Agronomy – Yellamandha Reddy
		Weed Science ▪ Weeds, their characteristics, dissemination and association with various crops; their multiplications; ▪ Cultural, biological, and chemical control of weeds. **Irrigation Management** ▪ Water-use efficiency in relation to crop production,	**Agriculture Optional Material by R.Kanagaraj** Or ▪ Agritech portal by TNAU

		▪ 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.	▪ Principles of Agronomy – Yellamandha Reddy ICAR – E-courses Agriculture website
2.	**04.07.2025**	**Cell Biology, Genetics and Plant Biotechnology** ▪ 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.	**Agriculture Optional Material by R.Kanagaraj** **Or** ▪ Fundamentals of Genetics – B.D. Singh ▪ Plant Breeding Principles and Methods – B.D.Singh

		▪ Cytoplasmic inheritance ▪ Sex-linked, sex-influenced and sex-limited characters. ▪ Role of genetic engineering and biotechnology in crop improvement Genetically modified crop plants.	
		Plant Breeding and Seed Technology ▪ History of plant breeding. ▪ Modes of reproduction, ▪ Selfing and crossing techniques. ▪ Origin, evolution and domestication of crop plants, ▪ Centre 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.	**Agriculture Optional Material by R.Kanagaraj** Or ▪ Fundamentals of Genetics – B.D. Singh ▪ Plant Breeding Principles and Methods – B.D.Singh ▪ Seed Technology – R.L.Agarwal

		▪ Role of interspecific and intergeneric hybridization **Seed Technology** ▪ 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 ▪ WTO issues and its impact on Agriculture.	
3.	**18.07.2025**	**Soil Science, Nutrient Management, Soil and Water Conservation and Dryland Agriculture** ▪ 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 **Nutrient Management** ▪ Essential plant nutrients and other beneficial elements in soils and plants.	**Agriculture Optional Material by R.Kanagaraj** Or ▪ Principles of Agronomy – Yellamandha Reddy ▪ Introductory Soil Science – Dilip Kumar Das

		▪ 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 phosphoruse and potassium use. ▪ Problem soils and their reclamation. ▪ Soil factors affecting green house gas emission. **Soil and Water Conservation and Dryland Agriculture** ▪ Soil conservation, integrated watershed management. ▪ Soil erosion and its management. ▪ Dry land agriculture and its problems. ▪ Technology for stabilising agriculture production in rainfed areas.	
		Farm Management, Agricultural Economy and Agricultural Extension ▪ Farm management, scope, importance and characteristics, ▪ Farm planning. Optimum resource use and budgeting. ▪ Economics of different types of farming systems.	**Agriculture Optional Material by R.Kanagaraj** Or

		▪ 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. **Agricultural Extension** ▪ 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.	• Economics of Farm Production and Management – VT Raju • Hand Book of Agricultural Extension – ICAR • ICAR – E-courses Agriculture website

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4.	**01.08.2025**	**Plant Physiology and Horticulture** ▪ Principles of Plant Physiology with reference to plant nutrition, absorption, translocation and metabolism of nutrients. ▪ Soil-water-plant relationship. ▪ 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—drought, salt and water stress. **Horticulture** ▪ 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.	**Agriculture Optional Material by R.Kanagaraj** Or Fundamentals of Plant Physiology – V.K.Jain Hand book of Horticulture - ICAR

		▪ Landscaping and commercial floriculture. ▪ Medicinal and aromatic plants. ▪ Role of fruits and vegetables in human nutrition.	
		Entomology, Pathology, Food Production, Food Security and Nutrition ▪ 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. ▪ Integrated 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. **Food Security** 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.	**Agriculture Optional Material by R.Kanagaraj** Or • Plant Pathology – R.S.Mehrotra • Elements of Economic Entomology – Vasantharaj David • ICAR – E-courses Agriculture website • Agritech Portal by TNAU

		Processing constraints. Relation of food production to National Dietary Guidelines and food consumption pattern. Food based dietary approaches to eliminate hunger. Nutrient deficiency – Micronutrient 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.	
5.	**08.08.2025**	**Full Mock Test-I** **Fore Noon - Paper I** **After Noon – Paper II**	
6.	**12.08.2025**	**All India Full Mock Test-II** **Fore Noon - Paper I** **After Noon – Paper II**	